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On the Linck collection and specimens of snakes figured by Johann Jakob Scheuchzer (1735) – the oldest fluid-preserved herpetological collection in the world?

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Abstract. One of the great private natural history cabinets of the 18th century was that of the Linck family of Leipzig pharmacists. Parts of the collection have survived to the present and form the core of the Naturalienkabinett Waldenburg in Saxony, Germany. The collection was particularly rich in reptiles and was documented by Johann Jakob Scheuchzer in his *Physica Sacra* (1731–1735), which figured 67 specimens of snakes and amphisbaenians based on a set of unpublished illustrations, the *Icones Serpentum et Viperarum*, prepared under the direction of Johann Heinrich Linck the Elder. We review the original herpetological content of the Linck collection as documented by Johann Heinrich Linck the Younger in his *Index Musae Linckiani* (1783–1787) and provide both a summary of earlier identifications (to 1858) of the species depicted in the *Icones* and *Physica Sacra* and new identifications based on our research. Some of these snakes served as holotypes or syntypes of species described by Linnaeus and Blasius Merrem and, thus, are of taxonomic significance. As many as 11 of these illustrated specimens (although none of them types), and an unknown number of others, are still extant in Waldenburg. At a minimum, these specimens were present in the Linck collection in 1729, but they may be as much as half a century older, as the reptile collection was already large and well-known by the debut of the century. Even at the minimum age possible, the surviving Linck snakes figured by Scheuchzer are among the oldest documented fluid-preserved herpetological specimens in the world.

Key words. Johann Heinrich Linck, Naturalienkabinett Waldenburg, *Physica Sacra*, Johann Jakob Scheuchzer, Serpentes, historic collections.

INTRODUCTION

Natural history cabinets, either self-standing, or as part of more inclusive curiosity cabinets or Kunstkammer, were a well-established feature of educated society throughout much of Europe by the late 16th century and flowered in the 17th century as the expansion of global trade and travel provided ever more subjects for collection and study (Seifert 1935; MacGregor 2007). Although many of the most sumptuous cabinets were owned by royal families and other aristocrats, there were also a great many scholarly and private cabinets, many of which were owned by physicians and apothecaries for whom objects of natural history were of professional as well as personal interest.

Perhaps the most famous of the early private natural history cabinets was that of Ulisse Aldrovandi (1522–1605), today represented by a variety of dried specimens and an extensive "paper museum" of contemporary paintings of natural objects (Alessandrini & Ceregato 2007; Bauer et al. 2013). Many others survive only in the form of published catalogues and iconic images, for example the museums of Francesco Calzolari (1521–1600; Ceruti & Chiocco 1622), Ferrante Imperato (1550–1625; Imperato 1599), Basilius Besler (1561–1629; Besler 1616, 1622, 1642), and Ole Worm (1588–1654; Worm 1655, see also Schepelern 1987, 1990). Not until the late 17th century when William Croone [or Croune] (1633–1684) and Robert Boyle (1627–1691) began experiments involving the alcohol preservation of organic specimens (Croune 1662 in Birch 1756; Boyle 1663 in Birch 1756; Boyle 1666) did fluid-preserved specimens become a hallmark of such collections.

Many of the spirit-preserved collections from the first third of the 18th century or earlier featured human anatomical preparations. Some still survive, including specimens from the collections of Bernhard Siegfried Albinus (1697–1770) in Leiden (Habrich 1994) and Frederik Ruysch (1638–1731), who sold his famous collection of anatomical specimens to Peter the Great in 1717 (Luyendijk-Elshout 1994; Driessen-van het Reve 2006). The latter included many skeletal preparations as well as dry injected mounts, none of which appear to have survived, but also fluid preserved material, some of which is still extant in St. Petersburg (Driessen-van het Reve 2006).

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Fig. 1. Stuffed anaconda (*Eunectes murinus*) from the first collection of Albertus Seba on display in the Zoological Institute of the Russian Academy of Sciences, St. Petersburg. The head of the specimen was missing and a new "head" fashioned from the front of the skin. Photo courtesy of Daniel A. Melnikov.

Zoological collections were also popular in natural history cabinets of this period and these often contained large numbers of fluid-preserved amphibians and reptiles (George 1987). Mostly obtained from the tropics, these were generally small, easy to store and display, and attractive to collectors in temperate Europe because of their exotic appearance as well their real and imagined medical significance. Perhaps the most well-known spirit-preserved herpetological collection of the early 18th century was that of Albertus Seba (1665–1736) who sold his first collection to Peter the Great in 1716 (Engel 1937; Driessen-van het Reve 2006) and then built an even larger second collection. All herpetological components of the first collection, except a stuffed anaconda (Fig. 1) and perhaps a few other dry preparations appear to have been lost (Juriev 1981), but remnants of the second collection are known to exist in a variety of museums, having been dispersed through a series of auctions following Seba's death (Boeseman 1970; Juriev 1981; Thireau et al. 1998; Bauer 2002; Daszkiewicz & Bauer 2006; Driessen-van het Reve 2006; Bauer & Günther 2013).

Fig. 2. Suspended stuffed crocodile (*Crocodylus niloticus*) mount and (below, in cabinets) spirit-preserved collection of amphibians, reptiles and other material in the Franckesche Stiftungen in Halle. The painted cabinet fronts are modern but reproduce historical designs. Photo: A. M. Bauer.

Older still is the collection of the Franckesche Stiftungen in Halle, established in 1698 as part of the orphanage and educational complex founded by August Hermann Francke (1663–1727) (Köhler 1799; Sauerlandt 1911; Storz 1962; Jahn 1994; Müller-Bahlke & Göltz 1998, Müller-Bahlke 2004). Today this collection includes 28

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[a]

[b]

Johann Heinrich Linck der Jüngere (1734—1807)
(Stich von G. G. Endner nach einem Gemälde von Knorr)

[c]

[d]

Plate 1. **a.** Heinrich Linck (1638–1717), founder of the Linck collection and of the Linck apothecary dynasty in Leipzig. Image from Seifert (1934) from an engraving by Nicolaus Haublein. **b.** Johann Heinrich Linck the Elder (1674–1734), son of Heinrich Linck and accomplished naturalist and pharmacist. Image courtesy of U. Budig, Museum Waldenburg – Naturalienkabinett und Stadtmuseum. **c.** Johann Heinrich Linck the Younger (1734–1807), grandson of H. Linck and son of J. H. Linck the Elder, who prepared the *Index Musae Linckiani*. Image from Seifert (1934) from an engraving by G. G. Endner. **d.** Fürst Otto Victor I von Schönburg-Waldenburg (1785–1859), who purchased the remaining portions of the Linck collection in 1839, establishing it in its existing building in 1844. Image courtesy of U. Budig, Museum Waldenburg – Naturalienkabinett und Stadtmuseum.

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Fig. 3. Exterior of the Museum Waldenburg Naturalienkabinett und Heimatmuseum in 2005. Photo: A. M. Bauer.

early 18th century alcohol preparations consisting chiefly of amphibians and reptiles as well as embryonic material (Altner 1984; Fig. 2). However, perhaps the most important intact herpetological collection from the dawn of fluid preservation is that established by the pharmacist Heinrich Linck (1638–1717; Plate 1a) in Leipzig, Germany. Linck was one of many European apothecaries who assembled such collections during the 17th century (Dilg 1994), but his collection, augmented by his son and grandson, is one of few that has survived – in part – the vagaries of more than 300 years of turbulent European history. Today the collection forms part of the Museum Waldenburg (Fig. 3) in the small Saxon town of Waldenburg, 67 km south of Leipzig, Germany and is regarded as one of the very oldest surviving museum collections of this kind (Mohr 1940; Fleck et al. 1990; Zinke 1999).

No records exist documenting the oldest parts of the collection and thus the unambiguous identification of any portions of the collection dating from Heinrich Linck's time is not possible. Nonetheless, the collection includes a number of distinctive specimens of various kinds that date from the first decades following Heinrich Linck's death. For example, the famous "chicken man" (Hühnermensch), a malformed human foetus, was described and figured in 1737 by Gottlieb Friderici and is still extant today (Müller 1999). Other specimens from these early days that are still present in the collection include a number of distinctive fossils (Rößler 1999a, 1999b), among them examples of "lying stones," crude fossil forgeries described by Beringer (1726), raw and worked mineral samples (Thalheim 1999), a collection of wood samples (Beyrich 1990; Otto & Otto 1999), and the dried echinoderms that were figured by Heinrich Linck's son, Johann Heinrich Linck the Elder, in his treatise *De Stellis Marinus* (1733a, 1733b). The collection at Waldenburg also includes a number of Linck birds from the 18th century (Steinheimer 2005).

On September 25–26, 2005 and again on June 22–23, 2009 we visited the Naturalienkabinett Waldenburg in order to examine its herpetological collections and to determine if any of the specimens therein could be confirmed as having survived from the early 18th century portion of the collection. Whether any material dates to the 17th century founding collection by Heinrich Linck is unknown, and probably unknowable, but the accurate illustration of some of the specimens of the Linck collection before 1730 (Scheuchzer 1735) provides a benchmark for establishing a minimum age of any illustrated specimens that still survive. Such specimens could, however, be as much as 60 years older. Thus, it is possible that any such extant specimens might represent the oldest fluid-preserved herpetological specimens in the world.

BUILDING OF THE LINCK COLLECTION

Heinrich Linck was born in 1638 in Danzig, a center of natural history collections and later home to Jakob Theodor Klein and other notable naturalists and collectors (Friedrich 2001; Daszkiewicz & Bauer 2006). He came to Leipzig in 1669 and first managed and then (1671) leased the pharmacy "Zum Goldenen Löwen", becoming its owner in 1686 (Bormann 1909; Seifert 1934, 1935; Beyrich 1994; Budig 1999b; Friedrich 2001). The pharmacy, as the Löwenapotheke, is still in business in its original position on Grimmaische Straße (Fig. 4) and in 2009

Fig. 4. The Löwenapotheke, on Grimmaische Straße, Leipzig has functioned as a pharmacy for over 600 years and was first managed by Heinrich Linck in 1669 under the name "Zum Goldenen Löwen." Photo: A. M. Bauer.

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Fig. 5. View of the Green Room, housing the bulk of the herpetological collections, on the first floor of the Museum – Naturalienkabinett Waldenburg. Photo: A. M. Bauer.

celebrated its 600th anniversary. Linck began collecting natural history specimens around 1671 or 1672 (Bormann 1909), although the details of the foundation of his natural history cabinet are largely unknown (Beyrich 1994; Budig 1999b), and continued to enlarge its holdings until his death in 1717. The collection became a family passion and the collection was enlarged by Heinrich's son, Johann Heinrich Linck the Elder (1674–1734; Plate 1b) and later by his grandson, Johann Heinrich Linck the Younger (1734–1807; Plate 1c).

Johann Heinrich the Elder established an extensive trading network with other collectors and also purchased material from all over the world. During his travels across Europe, Linck visited the important collections of Seba in Amsterdam, Klein in Danzig, and Sloane in London, amongst others (Seifert 1934, 1935; Beyrich 1994; Budig 1999b). As well as being a collector, Linck was a scientist himself and published an important work on starfish and related echinoderms (Linck 1733a, 1733b) and conducted a variety of entomological experiments (Seifert 1934; Beyrich 1994). He was also a member of the Kaiserlich Leopoldinisch-Carolinische Akademie der Naturforscher, and a corresponding member of the Accademia delle Scienze dell'Instituto di Bologna and the Royal Society of London (Lingke & Lingke 1909; Beyrich 1994; Budig 2007). After his death the collection languished for a time until his son came of age and took over both the pharmacy and the collection in 1757.

Johann Heinrich Linck the Younger subsequently enriched the collections by the purchase of the large natural history collection of Johann Christoph Richter (1689–1751) in 1784 (Beyrich 1994). Most importantly he reorganized the collection, largely after Linnaeus's *Systema Naturae* and published an extensive catalogue (Linck 1783–1787) listing the material then present, which included approximately 3,400 zoological items (Budig 1999b).

The Linck collection was already well known for its size and diversity by the early 18th century (Kanold in Neickelius 1727) and for many years thereafter it was noted as one of the treasures of Leipzig (Schulz 1784; Leonhardi 1799, Klemm 1838) and was visited by important zoologists, including Marcus Elieser Bloch (1723–1799), Johan Christian Fabricius (1745–1808), and Lorenz Oken (1779–1851) (Mohr 1940). Linck was honored by Johann Gottlob Schneider (1750–1822) who dedicated his *Amphibiorum Physiologiae, Specimen Alterum* (1792, 1797) "ad virum doctissimum Iohann. Henricum Linck Serenissimo Saxoniae Electori a Consiliis Commerciorum Academiae Caesareae Naturae Curiosorum Socium et cet." and, indeed, the last four pages of the work extol Linck's virtues and the value of his collection.

Following the death, in 1807, of Johann Heinrich Linck the Younger, his widow Dorothea Linck leased the pharmacy, eventually selling it to Karl Heinrich August Rhode in 1818. Upon her death in 1827, the collection was also purchased by Rhode. Rhode sold the fabulous library (documented by Linck 1787 and today represented by at least some volumes in the Universitätsbibliothek Leipzig) separately as well as some of the spirit-preserved specimens – including snakes and amphibians, but subsequently sold the remaining collection to Fürst Otto Victor I von Schönburg-Waldenburg (1785–1859; Plate 1d) in 1839 for 3,300 Thaler (Seifert 1934; Mohr 1940; Fleck et al. 1990; Beyrich 1994; Budig 1999b; Zinke 1999).

Otto Victor received the material in Waldenburg the following year (Beyrich 1990) and in 1844 moved it into a newly built museum (Budig 1999a; Fig. 3), where it is still housed today. Also in 1840, Otto Victor purchased several other significant natural history collections: the herbarium, mineralogical and geological collection of Dr. Karl Ferdinand Reichel (1800–1860), a pharmacist from Hohenstein (today Hohenstein-Ernstthal), an entomological collection from Karl Gerhardt, and an important collection of birds and other animals from Karl Ferdinand Oberländer (1805–1866) of Greiz, a baker and confectioner as well as an accomplished ornithologist (Heyder 1935; Mohr 1941; Beyrich 1990). The last significant addition to the collection was derived from the African hunting expedition of Otto Victor II (1882–1914) in 1908–1910, consisting chiefly of large mammals and birds.

On 26 October 1928 the Fürstlich Schönburg-Waldenburg'scher Familienverein "Schloß Waldenburg" was founded and subsequently administered the collection. During the period from early 1933 to 1 July 1934 the natural history collection was closed due to major renovations and reorganization of the collection motivated by Fürst Günther von Schönburg-Waldenburg (Seifert 1935; Fischer 1936). On 25 October 1945 control of the collection passed to the Landesverwaltung Sachsen and in 1951 responsibility was transferred to the town of Waldenburg, which continues as the custodian of the collection. Today

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the Naturalienkabinett is housed in the upper floor of the museum building (Fig. 5), whereas the Stadtmuseum (formerly Heimatmuseum) occupies the ground floor.

Its purchase and move to Waldenburg account for the survival of the Linck collection in World War II, when other collections in Leipzig were damaged or destroyed by allied bombing (3–4 December 1943). However, the amalgamation of several collections by Fürst Otto Victor I, as well as his subsequent additions to the collection through the early 20th century clouded the identity of the original Linck collection. Nonetheless, it has been argued that historical museum material can be reasonably identified on the basis of intrinsic evidence in the absence of preserved labels or other documentation (Faxon 1915) and we employ this approach to identify some of the oldest extant specimens in the Linck collection.

HERPETOLOGICAL SPECIMENS IN THE LINCK COLLECTION

From at least the time of Johann Heinrich Linck the Elder, herpetology was a focal point in the Linck collection. By 1727 the collection included 800 jars of spirit preserved specimens, including many snakes and other herpetological specimens (Kanold in Neickelius 1727). By 1783, when the first and only published catalogue of the collection appeared, amphibians and reptiles constituted approximately 50% of the spirit preserved collection, or almost 450 specimens. This is larger than the herpetological collection of Marcus Elieser Bloch, assembled in the mid- to late 18th century, which formed the nucleus of the Zoological Museum of Berlin in 1810 and originally included about 380 specimens (Bauer & Günther 2006).

The catalogue of the Linck collection, the *Index Musae Linckiani* (Plate 2a) was published in three parts between 1783 and 1787 (incorrectly stated to be different editions by MacGregor 2007; now available online through Die Sächsische Landesbibliothek – Staats- und Universitätsbibliothek Dresden at http://digital.slub-dresden.de/werkansicht/dlf/9369/1/0/cache.off). The first part (Linck 1783) includes the section "Die Amphibien. Amphibia," divided into "Schwimmende Amphibien. Nantes," including lampreys, sharks and rays, sturgeons and a diversity of teleosts, "Kriechende Amphibien. Reptiles," including most amphibians and non-avian reptiles except snakes, and "Schleichende Amphibien. Serpentes," including snakes, as well as amphisbaenians, caecilians, and some limbless lizards. The latter two sections occupy pages 61–79 in the catalogue and are followed by a two-page section "Einzelne Theile von Amphibien" comprising skins, eggs, and other parts of "Amphibien" as broadly construed. An appendix in part 1 (Anhang; pages 275–277) lists specimens that initially were overlooked or obtained while the catalogue was in press and includes on page 276 a single additional specimen of a snake (*Coluber coerulescens*) that appears to have been missed initially. The third and last part of the *Index* (Linck 1787) contains a supplement (Additamenta; pages 245–260) that includes three snakes on page 248, one being the same listed in the appendix mentioned above.

Latin names follow Linnaeus (1766) in nearly all cases (Table 1), and in a few instances, Linck cited a descriptive name from Seba's *Thesaurus* (1734, 1735) or another source. German vernacular names are also provided, along with the country or region of origin of the species (if known), and occasionally more extensive comments. Linck collection specimen numbers are also provided as are plate and figure references for those specimens figured in published works (Plate 2b; Table 2). The *Index* lists 10 species of chelonians, 13 species of frogs, one crocodile, two amphisbaenians, one caecilian, 28 species of lizards, three species of salamanders and 63 species of snakes (numerous specimens listed by Linck as varieties of some of these actually represent separate species). In addition, the *Index* lists three large snake skins, snake vertebrae, rattlesnake rattles, numerous snake, turtle and crocodile eggs, and a "snake stone," supposedly taken from the head of a large snake.

It is unknown what cataloguing system, if any, was used prior to the time of Johann Heinrich Linck the Younger. His system (Linck 1783), however, included several categories. Dry preparations were numbered separately from spirit-preserved ones and a separate numbering applied to specimens kept in numbered drawers. Thus, the chelonians included specimens 1–8 in drawer 25, as well as dry preparations 95–100 plus 100A and 100B, and spirit specimens 326 and 327 (Table 1). In total, the spirit specimens range from 293 to 697, but with the addition of a few intercalated specimens with an alphabetical suffix, the total number of spirit-preserved herpetological specimens comes to 411. Dry preparations included eight turtles plus two large snake skins (all probably displayed on the walls or hung from the ceiling) and smaller specimens stored in some of the 184 drawers devoted to zoological specimens (eight chelonians in drawer 25, one frog and seven lizards in drawer 27, two snakes in drawer 24, a third snake skin and an unspecified number of rattlesnake rattles in drawer 127, crocodile and turtle eggs in drawer 17, and snake vertebrae and "snake stone" in drawer 175). Unfortunately, no trace of these earliest labels remains with the specimens today, nor were any labels apparently present at the time of the reorganization of the collection in 1933/34 (Seifert 1935), and no correspondence between these early numbers and those used subsequently can be established, except in cases where the extant specimens are both unique and known to have been part of the collection in the late 18th century.

Another copy of the Linck *Index* in the Universitätsbibliothek Leipzig bears additions in the hand of J.H. Linck

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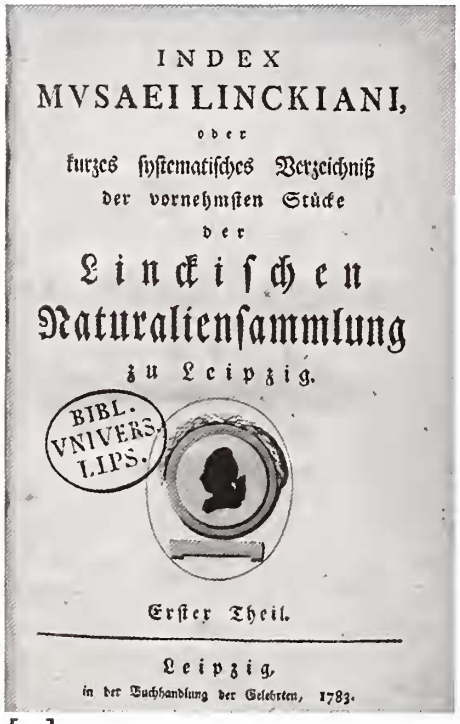
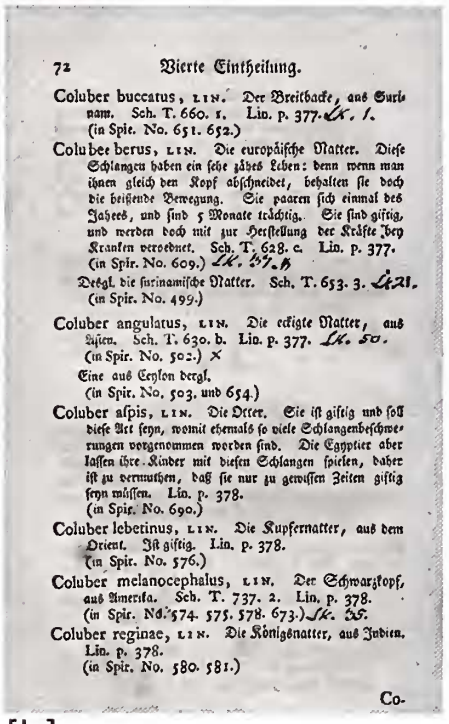
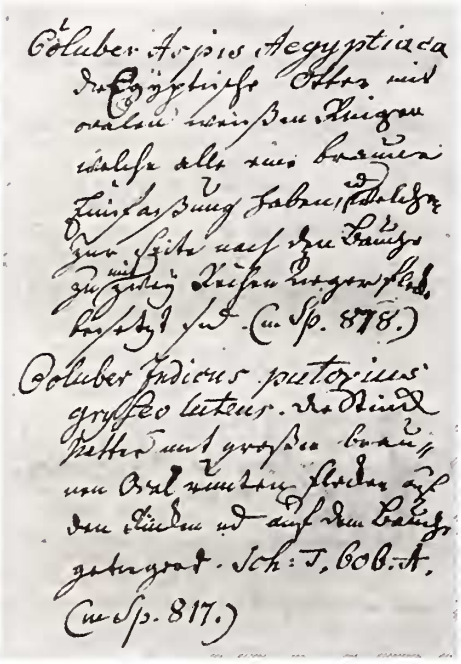

INDEX
MVSAEI LINCKIANI,
oder
kurzes systematisches Verzeichniß
der vornehmsten Stücke
der
Linckischen
Naturaliensammlung
zu Leipzig.
BIBL. VNIVERS. LIPS.
Erster Theil.
Leipzig,
in der Buchhandlung der Gelehrten, 1783.
[a]


72 Vierte Eintheilung.
Coluber buccatus, LIN. Der Breitbacke, aus Surinam. Sch. T. 660. 1. Lin. p. 377. LK. 1. (in Spic. No. 651. 652.)
Colubee berus, LIN. Die europäische Natter. Diese Schlangen haben ein sehr zähes Leben: denn wenn man ihnen gleich den Kopf abschneidet, behalten sie doch die beißende Bewegung. Sie paaren sich einmal des Jahres, und sind 5 Monate trächtig. Sie sind giftig, und werden doch mit zur Herstellung der Kräfte bey Kranken verordnet. Sch. T. 628. c. Lin. p. 377. (in Spir. No. 609.) LK. 57. b
Detgl. die surinamische Natter. Sch. T. 653. 3. LK. 21. (in Spic. No. 499.)
Coluber angulatus, LIN. Die eckigte Natter, aus Asien. Sch. T. 630. b. Lin. p. 377. LK. 50. (in Spir. No. 502.) X
Eine aus Ceylon dergl. (in Spir. No. 503. und 654.)
Coluber aspis, LIN. Die Otter. Sie ist giftig und soll diese Art seyn, womit ehemals so viele Schlangenbeschwerungen vorgenommen worden sind. Die Egyptier aber lassen ihre Kinder mit diesen Schlangen spielen, daher ist zu vermuthen, daß sie nur zu gewissen Zeiten giftig seyn müssen. Lin. p. 378. (in Spic. No. 690.)
Coluber lebetinus, LIN. Die Kupfernatter, aus dem Orient. Ist giftig. Lin. p. 378. (in Spir. No. 576.)
Coluber melanocephalus, LIN. Der Schwarzkopf, aus Amerika. Sch. T. 737. 2. Lin. p. 378. (in Spir. No. 574. 575. 578. 673.) Sk. 25.
Coluber reginae, LIN. Die Königsnatter, aus Indien. Lin. p. 378. (in Spir. No. 580. 581.)
Co-
[b]


Coluber Aspis Aegyptiaca
Die Egyptische Otter mit
ovalen weissen Ringen
welche alle zwey braune
Einfassung haben welche
zur Seite nach dem Bauche
zu gezackte Linien vorgestellt.
besitzt Sch. (cf. Sp. 878.)
Coluber fuscus pectoralis
grosser Lutzer. Die Rücken
Seiten und grosse braune
und Oval umher stehen auf
dem Rücken und auf dem Bauche
getragen. Sch: T. 60. A.
(cf Sp. 817.)
[c]

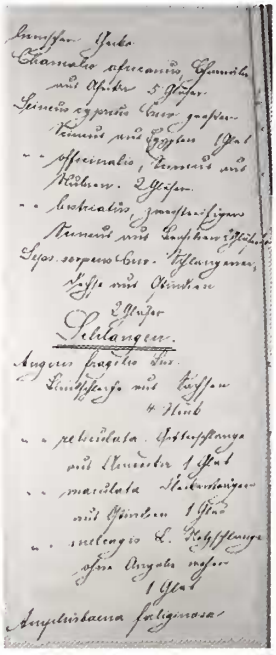

Serpentes Vipera
Crotalus adamanteus, Klapper
mit Spitzer 5 Glieder
Crotalus horridus Cuv. gespen-
Klapper mit Spitzer 1 Glied
horridus mit Spitzer, Klapper aus
Kirchen. 2 Glieder
Australis, braunschwarz
Klapper mit Spitzer Kirchen
Hydrus serpentinus Cuv. Schlangen,
Lesse mit Klapper
2 Glieder
Schlangen.
Angues fragilis Daud.
Landschlange mit Kasse
& Klapp
- - pellucida Glasschlange
mit Klapper 1 Glied
- - maculata Schlangen
mit Flecken 1 Glied
- - inelegans L. Schlange
ohne Angabe woher
1 Glied
Anguis vivipara fuliginosa
[d]

Plate 2. **a.** Title page of volume I of the *Index Musae Linckiani* (1783). Image courtesy of Universitätsbibliothek Leipzig. **b.** Typical snake specimen accounts in the *Index Musae Linckiani* (1783) showing Linck's associations with names from Linnaeus (1766) and reference to Scheuchzer (1735) plates. "LK" (Linck Kabinett) numbers corresponding to the illustration numbers in the *Icones Serpentum et Viperarum* have been added in the hand of J. H. Linck the Younger. Image courtesy of Universitätsbibliothek Leipzig. **c.** Reverse of inserted leaf in the Universitätsbibliothek Leipzig copy of the *Index Musae Linckiani* (1783), with additions in the hand of J. H. Linck the younger. Image courtesy of Universitätsbibliothek Leipzig. **d.** Page of reptile entries in *Verzeichnis der im Fürstlichen Museum zu Waldenburg befindlichen Gegenstände* (Arehiv Museum Waldenburg, 315), the 1886 hand-written version of the museum catalogue. Photo: A. M. Bauer.

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Fig. 6. Cover of number 8 (Mohr, 1940) of *Mitteilungen des Fürstlich Schönburg-Waldenburgschen Familienvereins*, published by the Familienverein "Sehloß Waldenburg." Courtesy of Museum für Naturkunde, Berlin.

himself (Mohr 1940; Budig 1999b). In the herpetological portion of the catalogue there are three such annotations. On page 76, specimen number 684 has been stricken out under the entry for *Coluber haie* and, on a leaf inserted after this page, the same number has been assigned to *Coluber Dipsas* (specimen 684). On the reverse of the same leaf *Coluber Aspis Aegyptiaca* (specimen 818) and *Coluber Indicus putorius gryseo-luteus* (specimen 817) have both been added (Plate 2c). These changes must have been made very shortly after the publication of the catalogue, as the third part of the catalogue (Linck 1787) includes an Additamenta section in which they are printed along with reference to the originally omitted specimen of *Coluber coerulescens*. Further, the specimen numbers assigned to the two new entries closely follow the highest number for a spirit preserved specimen in the first part of the catalogue (815, a monkey mentioned in the list of specimens obtained while the catalogue was in press). This also suggests that specimens added after the publication of the catalogue were given sequential numbers, regardless of the taxonomic group to which they belonged.

Following Linck's catalogues (1783–1787) the next recorded accounting of the herpetological holdings of the collection was the *Verzeichnis der im Fürstlichen Museum zu Waldenburg befindlichen Gegenstände* (Archiv Museum Waldenburg, 315). This handwritten document, prepared in 1886, lists the spirit preserved amphibians and reptiles on 10 pages. In this list, which uses contemporary nomenclature, no specimen numbers are listed, only the number of jars (Plate 2d). This list certainly includes newer material, probably from the Oberländer collection – also purchased by Otto Victor in 1840, as distinctive species, such as *Phrynosoma orbiculata* [sic], not from the Linck collection, are included. However, a diversity of material corresponding to the older collection is also listed. Three handwritten copies of this document exist at the Museum, differing only in presentation but not content with respect to "Amphibien in Spiritus."

In the 1930s a major reorganization of the Naturalienkabinett was undertaken in which an attempt to identify the Linck specimens present since at least the time of Johann Heinrich the Younger was made. This took place during the time of Prince Günther of Schönburg (1887–1960) who took an active interest in the museum and its collections and was active in the Fürstlich Schönburg-Waldenburg'scher Familienverein "Schloss Waldenburg," which published its own *Mitteilungen* (Fig. 6), with contributions about the historical collections.

The identification of these early specimens was carried out in 1933 and 1934 by the mineralogist Alfred Seifert (1906–1953) and the zoologist Konstantin Leopold Wöpke (????–1944; Fig. 7) as part of a major reorganization

Fig. 7. Zoologist Konstantin Wöpke (left), museum guard Albin Clauder (eenter), and mineralogist Alfred Seifert (right) in front of thc Muscum Waldenburg Naturalienkabinett und Heimatmuseum in 1933 or 1934. Wöpke and Seifert reorganized the Waldenburg Museum collections and attempted to identify material dating to the time of Johann Heinrieh Linek the Younger. Image courtesy of U. Budig, Muscum Waldenburg – Naturalienkabinett und Stadtmuseum.

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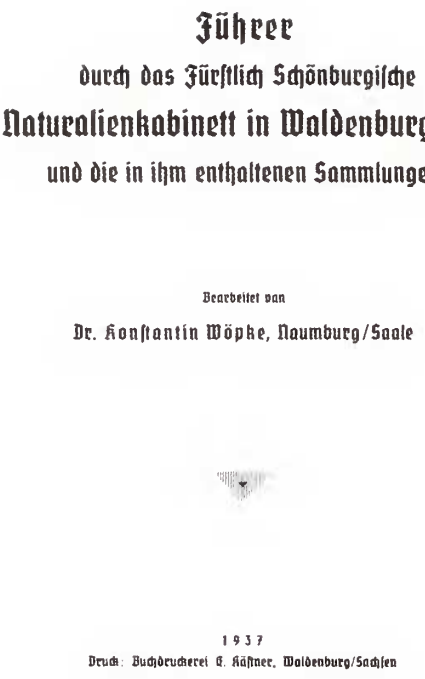

Führer

durch das Fürstlich Schönburgische

Naturalienkabinett in Waldenburg/Sa.

und die in ihm enthaltenen Sammlungen

Bearbeitet von

Dr. Konstantin Wöpke, Naumburg/Saale

1937

Druck: Buchdruckerei C. Kästner, Waldenburg/Sachsen

Fig. 8. Title page of the guide to the reorganized Waldenburg Museum prepared by K. Wöpke (1937).

of the Waldenburg collections (Budig 1999a), although subsequent workers have identified other zoological specimens from Linck's collection that were not recognized as such during the 1930s (Mohr 1940). Exactly how presumed original Linck specimens were recognized is unknown. It is unclear if the jars used at the time of the cataloguing in 1783 were actually numbered, or if the positions of the jars on shelves were numbered. In either case, no unambiguous numbering system of specimens seems to have survived to the 20th century (Seifert 1935), nor does the earlier catalogue of 1886 suggest that any numbering system was present at that time (Wöpke 1937). Rather, it is likely that Wöpke tried to match specimens to those listed in Linck (1783–1787). Seifert (1934, fig. p. 36; 1935, fig. 1) figured a selection of spirit-preserved specimens, chiefly snakes, that were supposedly from the Linck collection. No markings can be seen on the jars (although some numbering system may have been used on the top of the bladders capping the jars). Wöpke, who had actually published a single paper in herpetology (Wöpke 1930) based on his Inaugural-Dissertation from the University of Leipzig, later published a visitor's guide to the collections (Wöpke 1937; Fig. 8) in which he stated that he believed that a large number of the specimens on display dated to the time of J.H. Linck the Younger.

Specimens believed to be part of the original (pre-1783) Linck collection were given red labels in the 1933/34 reorganization (Beyrich 1990; Fleck et al. 1990) and these remain associated with these specimens today. Material present at the time of the reorganization is recorded in the *Accessions Katalog der zoologischen Abteilung des Fürstlich-Schönburgischen Museums zu Waldenburg i./Sa.* (Archiv Museum Waldenburg 342; Fig. 9) prepared by Wöpke. In this document, ruled columns record Lfde. Nr. (consecutive number = a different number assigned to each species), Bezeichnung (description = species and type of preparation), Fundort bezw. Vorkommen (locality or, more commonly, distribution), Zahl (number of specimens), Dat. (date – only for "modern" specimens), Standort (physical position in the collection), and Bemerkungen (remarks – generally correspondence to the page and specimen number in the *Index Musae Linckiani*). In general, the first three columns are typed and others have entries in ink; additions and corrections to the names and localities are also entered in ink in Wöpke's hand. The old collection of amphibians and reptiles occupies seven pages in the catalogue. In addition, two mounted reptiles are listed from the African trip of Otto Viktor II, both collected in 1908: "2069, *Crocodilus* [sic, *Crocodylus*] *niloticus* Laur., Nilkrokodil, Afrika" and "2070, *Emys orbicularis*

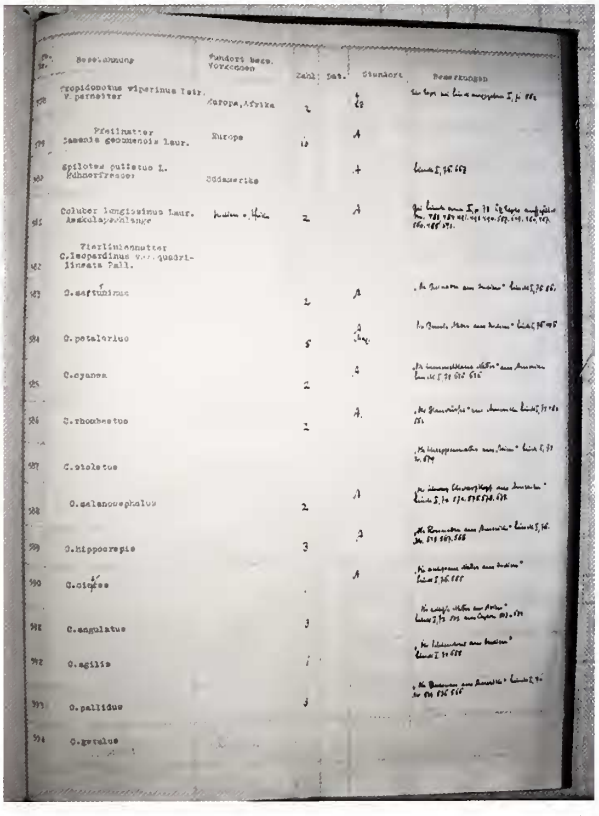

Fig. 9. Page of reptile specimens from *Accessions Katalog der zoologischen Abteilung des Fürstlich-Schönburgischen Museums zu Waldenburg i./Sa.* (Archiv Museum Waldenburg 342), a catalogue of the collection prepared by K. Wöpke during the reorganization of the museum in 1933. Photo: A. M. Bauer.

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Fig. 10. View of part of the herpetological collection in the Naturalienkabinett Waldenburg showing jars sealed with glass plates and covered in picein that were prepared during the 1994 reorganization of the collection. Photo: A. M. Bauer.

L., Sumpfschildkröte, Europa u. Westasien" [this specimen is actually the large and highly distinctive softshell turtle, *Trionyx triunguis*, the misidentification suggests that Wöpke's knowledge of systematic herpetology was limited]. The number of entries for the old collection totals 98 species and approximately 250 specimens, falling in the number range 527– 645. The next inventory was conducted in 1994 and was recorded on index cards, one per specimen, each with data on one side and a black and white photo on the reverse. The specimens were each given numbers (applied to their jars or to the specimens themselves in the case of dry preparations), where the number is not shared with either the *Index Musae Linckiani* or the 1933/34 *Accessions Katalog*. Each number is prefaced by a Roman numeral "I," signifying a zoological object, and followed by the designation "A_3," indicating a herpetological specimen according to the museum inventory system devised by Knorr (1957). These same specimen numbers were recorded in the most recent inventory (2001) and small labels bearing these numbers have been uniformly affixed to specimen jars and dry specimens or their mounts.

The existing fluid preserved specimens were last topped-up with ethanol and their containers sealed in 1993–1994 by the then preparator of the Museum, Olaf Zinke. At least some of the containers of amphibians and reptiles are conserved in 80% alcohol (presumably ethanol) and 5% glycerin, as recommended by Arndt (1937, 1943). The glass jars are sealed with a glass plate and covered in picein (Fig. 10). Prior to this the preparations were in 95% alcohol and sealed with a tin plate and cow's bladder (Zinke 1999; see Beyrich 1990, fig. 6; Zinke 1990, fig. p. 90), a common sealing technique of the late 18th century (Bauer & Günther 2006). This and other 17th and 18th century methods for sealing glass containers for fluid-preserved specimens were presented by Ruysch (1710), Turgot & Duhamel du Monceau (1758), Pallas (1781), Pole (1790) and Osiander (1793) and these and other methods were later summarized by Naumann (1815), Thomas (1892), Altner (1984), and Carter & Walker (1999).

The existing spirit-preserved collections in Waldenburg comprise 120 fish, 18 amphibians, 95 reptiles and 22 anatomical preparations (Zinke 1999). The fish have been

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Fig. 11. Dry preparation of a loggerhead sea turtle (*Caretta caretta*) suspended from the ceiling of the "Linckzimmer," a room in the Naturalienkabinett containing specimens believed to be from the period of the Linck family and arranged in the fashion of the 18th century. Photo: A. M. Bauer.

discussed earlier (Mohr 1940). Herpetological specimens, both ethanol preserved and dry preparations, are found chiefly in "das erste grüne Zimmer," whereas a few jars occupy a glass-fronted cabinet on the stairwell landing, and several large sea turtles and some additional spirit preserved specimens are in the "Linckzimmer" in an arrangement that has remained essentially the same since the 1933–34 renovations (Fischer 1936; Fig. 11). Two additional mounted reptile specimens, a Nile crocodile (*Crocodylus niloticus*) and African softshell turtle (*Trionyx triunguis*) dating from Otto Victor II's African expedition are on display in "das braune Zimmer."

SCHEUCHZER, SEBA, AND LINCK'S *ICONES*

From 1714 onward, Johann Heinrich Linck the Elder maintained a correspondence with the Swiss naturalist and physician Johann Jakob Scheuchzer (1672–1733) (Beyrich 1994; Budig 1999b). Linck had just purchased the collection of Christian Sigismund Wolf (1685–1737), which included material in turn obtained from Scheuchzer. In the intervening years, the two exchanged specimens, as well as letters (Beyrich 1994). Linck's letters to Scheuchzer are today preserved as Ms. H 304 (pp. 211–306) in the Zentralbibliothek Zürich. Linck had originally planned to publish one or more works on zoology, including snakes, with Albertus Seba, and had even sent copper engravings of snakes and other specimens to him. However, Seba returned these to Linck, although he had made copies, some of which served as the basis for illustrations in Seba's own *Thesaurus* (1734–1735). As has often been noted, however, Linck objected to plate layouts like those of Seba, which combined a variety of unrelated natural history objects in order to achieve an artistic effect (Müsch 2000). Ultimately he turned to Scheuchzer in order to have his snake images published.

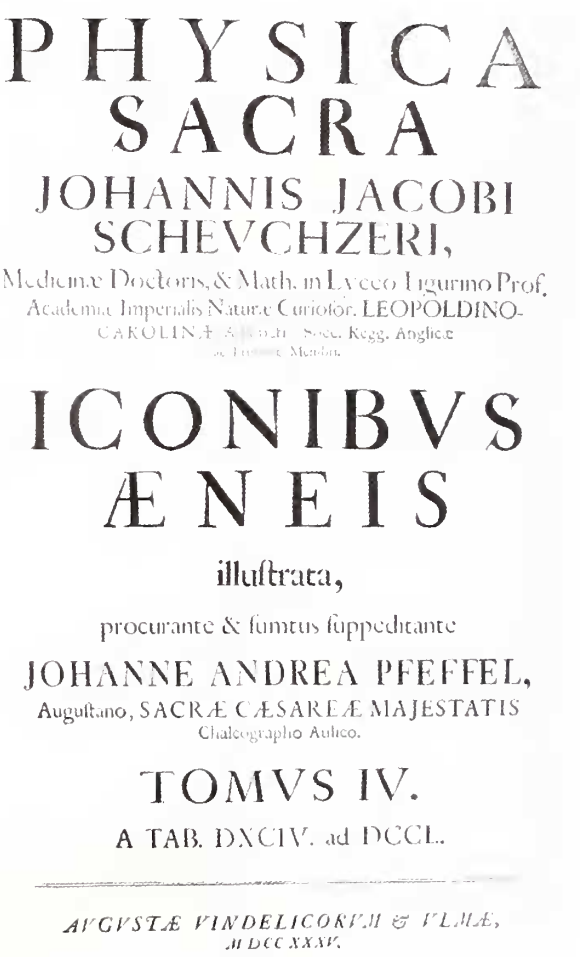
PHYSICA
SACRA
JOHANNIS JACOBI
SCHEVCHZERI,
Medicinæ Doctoris, & Math. in Lyceo Tigurino Prof.
Academiæ Imperialis Naturæ Curiosor. LEOPOLDINO-
CAROLINÆ & Reg. Soc. Regg. Angliæ
ICONIBVS
ÆNEIS
illustrata,
procurante & sumtus suppeditante
JOHANNE ANDREA PFEFFEL,
Augustano, SACRÆ CÆSAREÆ MAJESTATIS
Chalcographo Aulico.
TOMVS IV.
A TAB. DXCIV. ad DCCL.
AVGVSTÆ VINDELICORVM & VLMÆ,
MDCCXXXV.

Fig. 12. Title page to volume 4 of the *Physica Sacra* (Scheuchzer 1735), which includes all 24 of the plates depicting Linck's snake collection.

Scheuchzer's *Physica Sacra* or "Copper Bible" (1731–1735; Fig. 12) was illustrated by 760 copper engraved plates, the vast majority of which depicted biblical scenes incorporating aspects of natural history, which were designed by Johann Melchior Füßli (1677–1736) and engraved by Johann Andreas Pfeffel (1674–1748) (Fischer 1973; Müsch 2000). The history of this grand undertaking and its execution are chronicled by Müsch (2000). Included among the biblical scenes were a number of plates illustrating actual natural history specimens. Among these was the famous *Homo diluvii testis* (first described by Scheuchzer in 1726) as well as 24 plates (606, 628–630, 647–648, 652–655, 657, 660–662, 678, 715, 717, 737–739, 746–749) depicting 67 snakes and amphisbaenians from the Linck collection (Table 2), all in the fourth and final volume of the work. These plates appear to have been executed by 1730 (Seifert 1934), establish-

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ing a minimum age of specimens illustrated in the *Physica Sacra*.

The Leipzig University Library today holds a set of colored illustrations of fish and reptiles (*Icones Piscium Musei Linckiani nach daselbst befindlichen Originalen gemahlt* and *Icones serpentum et viperarum Musei Linckiani nach daselbst befindlichen Originalen gemahlt* – hereafter simply the *Icones*), rediscovered in 1998, that are believed to have been the original drawings upon which the plates of Scheuchzer were ultimately based (Budig 1999b, Zinke 1999). The snakes are illustrated with one specimen per sheet, except for plate LXVII, on which two snakes are figured. The paintings were originally prepared under the direction of Johann Heinrich Linck the Elder and were sent to Scheuchzer no later than 1730 (they are mentioned in a letter sent by Linck to Scheuchzer on 17 March 1730; Zentralbibliothek Zürich Ms. H 304). In the text accompanying the first of the Linck snake plates (pl. 606) Scheuchzer (1735) specifically mentions that J.H. Linck had sent him color illustrations for use in preparing the plates. Johann Heinrich Linck the Younger subsequently bound the paintings returned by Scheuchzer and appended his own notes to them (Budig 1999b). Linck's notes, in Latin, appear on the pages facing the corresponding plates. They typically provide the Roman numeral of the plate, a copy of the text from Linnaeus (1766) for the species to which Linck believed each snake to belong, and, at the bottom, Scheuchzer's (1735) plate and figure designation, a page reference to Linnaeus (1766), and the collection number of the spirit specimen illustrated, as recorded in the *Index Musae Linckiani*. Presumably, when multiple specimens were listed these also included specimens referable to not only to the same species as recognized by Linck, but also the same variety or form (see Table 1). In all there are 89 plates numbered I–XC (plate LXXXVI is apparently lacking, see Table 3). The first 67 of these, with the exception of number LXVI, are all represented by figures and accompanying text in Scheuchzer (1735) and of these only IV and XLVII are not explicitly associated with particular spirit specimens (although the number of the specimen corresponding to plate XLVII was handwritten into Linck's annotated copy of the *Index*). Plates 68–90 generally lack text and references to Linck collection specimens, although plates LXXII, LXXIX, LXXXIV, and LXXXV do correspond to particular specimens (Table 3).

The Roman numeral plate numbers in the *Icones* are equivalent to "Musei Linckiani" specimen numbers represented in Arabic numerals on the *Physica Sacra* plates for each corresponding species and corroborate that the *Icones* illustrations were available to Scheuchzer. These same numbers were also added to the annotated copy of the *Index* in in Linck's hand, prefaced by "LK" for Linck Kabinett (Plate 2b).

Thirteen pen and wash paintings similar to those in the *Icones*, were offered at an auction in London on 13 May 2004, but went unsold and were offered again for sale in 2013. These each depict multiple specimens, presumably clustered for Scheuchzer's use. Eight of these correspond in content to the finished plates as published in the *Physica Sacra* whereas the remaining five images were never published and possibly never even engraved. These paintings appear to be annotated in Linck's hand, suggesting that they were prepared in Leipzig rather than having been executed in Zürich from drawings sent by Linck. The correspondence between these paintings and those in the *Icones* is exact and the former were probably traced from the latter.

TAXONOMIC SIGNIFICANCE OF THE LINCK COLLECTION

During the 18th century, the Linck collection was visited by a number of well-known taxonomists, who selected specimens as type material. For example, among ichthyological specimens, the extant holotype of *Lutianus linckii* (or *Lutjanus linkii*; the name is spelled differently in the text and on the accompanying plate in the description *fide* Eschmeyer 1998), a synonym of *Symphodus tinca* (Linnaeus, 1758), was described and figured by Marcus Elesier Bloch (1790), who visited the collection in 1767 (Mohr 1940; Zinke 1999). Although few herpetological taxonomists appear to have seen or worked with the Linck collection, Scheuchzer's plates in the *Physica Sacra* made at least some of the collection well-known to a broad audience. As was common at the time, and well into the 19th century, these images were sometimes chosen as iconotypes and the specimens upon which the images were based served as holotypes or syntypes of validly described taxa. Among the Linck snakes at least seven specimens illustrated by Scheuchzer (1735) represent type specimens. Linnaeus (1758) based two names, in part, on specimens from the Linck collection (Bauer 2012). *Boa scytale*, considered a synonym of *Ennectes murinus* (Linnaeus, 1758) by McDiarmid et al. (1999), is based on indications to a specimen noted by Gronovius (1756:55) and one illustrated by Scheuchzer (1735) as figure 1 on plate 737 of *Physica Sacra* (Plate 3a). Linck (1783), however, considered this illustration to be of *Coluber aesculapii* – nos. 483–484 in the Linck catalogue, a species now called *Scaphiodontophis venustissimus* (Wied, 1821). Linnaeus (1766) later revised and expanded the description of *B. scytale* in the 12th edition of *Systema Naturae* so significantly from that of 1758 as to be unrecognizable as the same species. Smith & Gloyd (1963) consequently restricted the application of the name *Boa scytale* to the anaconda, *E. murinus*, the species clearly intended by Linnaeus (1766) and consistent with the general use of the name over the proceeding two centuries.

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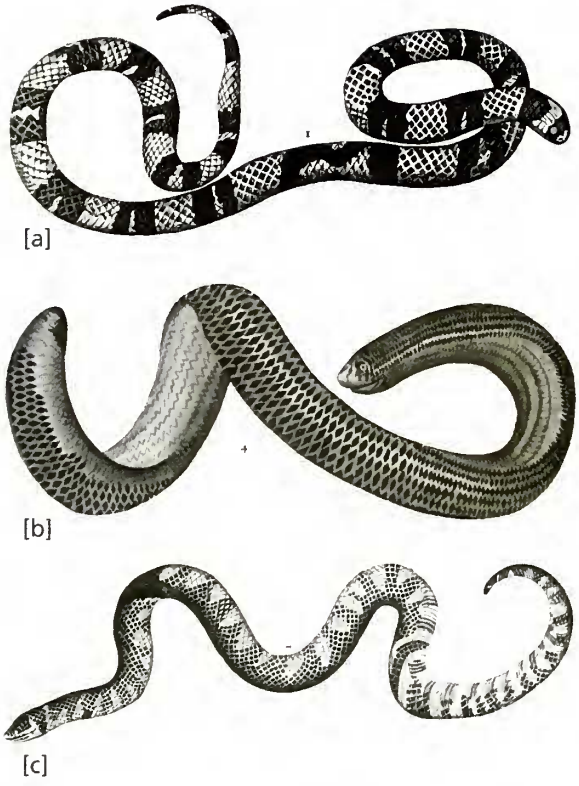

Plate 3. **a.** Figure 1, plate 737 from *Physica Sacra* (Scheuchzer 1735). The Linck specimen illustrated is one of two syntypes of *Boa scytale* Linnaeus 1758 [= *Eunectes murinus* (Linnaeus 1758)] but is actually referable to *Erythrolamprus aesculapii*. (see text for explanation). In this and other figures from *Physica Sacra* elements other than the specimens of interest have been digitally removed for clarity. **b.** Figure 4, plate 747 from *Physica Sacra* (Scheuchzer 1735). The Linck specimen illustrated is one of two syntypes of *Anguis reticulata* Linnaeus 1758 [= *Typhlops reticulatus*]. **c.** Figure 1, plate 647 from *Physica Sacra* (Scheuchzer 1735). The Linck specimen illustrated is the holotype of *Scytale Scheuchzeri* Merrem, 1820 [= *Cylindrophis ruffus* (Laurenti 1768)].

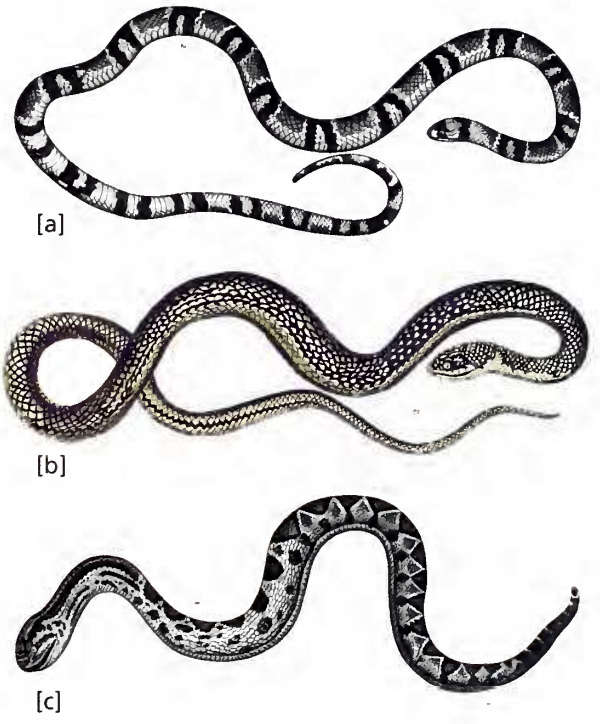

Plate 4. **a.** Figure 2, plate 648 from *Physica Sacra* (Scheuchzer 1735). The Linck specimen illustrated was one of the sources for the description of *Elaps corallinus* Merrem, 1820 [= *Micrurus corallinus*]. **b.** Figure 2, plate 746 from *Physica Sacra* (Scheuchzer 1735). The Linck specimen illustrated depicts the holotype of *Coluber* (*Natrix*) *cancellatus* Merrem, 1820 [= *Liophis reginae* (Linnaeus 1758)]. **c.** Figure 1, plate 648 from *Physica Sacra* (Scheuchzer 1735). The Linck specimen illustrated is a syntype of *Cophias Jararaca* Merrem 1820 [= *Bothropoides jararaca*].

A second Linck specimen serves as a type of the Linnaean name *Anguis reticulata* = *Typhlops reticulatus fide* McDiarmid et al. (1999). Linnaeus (1758) cited both a Gronovius (1756) specimen, and Scheuchzer's illustration (pl. 747, fig. 4). Scheuchzer's illustration clearly shows the diagnostic pale snout and pale tail ring of this species (Plate 3b).

Merrem (1820) also cited a number of Scheuchzer plates in his original descriptions. *Scytale Scheuchzeri* Merrem, 1820, a synonym of *Cylindrophis ruffus*, is based solely on the snake depicted in Scheuchzer's plate 647, figure 1 (Plate 3c). *Elaps corallinus* Merrem, 1820 (now *Micrurus corallinus*) was based on Scheuchzer's plate 648, figure 2 (Plate 4a) and questionably plate 737, figure 1, although the names *Coluber fulvius* Linnaeus, *C. nigro-rufus* La Cépède, and *C. fulvus* Latreille were also associated with the latter specimen by Merrem. According to Roze (1966) Merrem's description was also based on specimens collected by Wied and published on by him later in the same year (Wied 1820). Roze (1966), therefore, designated AMNH 3911, collected by Wied, as the lectotype. Scheuchzer's plate 746, figure 2 (Plate 4b) depicts the holotype of *Coluber* (*Natrix*) *cancellatus* Merrem, 1820, a synonym of *Liophis reginae*. *Cophias Jararaca* (= *Bothropoides jararaca*) also appears to have been described by Merrem (1820) based, in part, on Schecuchzer's plate 648, figure 1 (Plate 4c). However, McDiarmid et al. (1999) and other sources credit the name to Wied (1824). Although *Coluber ornatus* (= *Clurysopelea ornata*) is correctly credited to Shaw, 1802, Schlegel (1837) cited Scheuchzer's plate 606, figure C as an image of a syntype of *Coluber* (*Natrix*) *ornatus* Merrem, 1820. Schlegel (1837) also cited Scheuchzer's plate 630, figure A as the image of the type of *Coluber* (*Natrix*) *Scheuchzeri* (= ? *Platyceps rhodorachis fide* Wallach 2012), although Mer-

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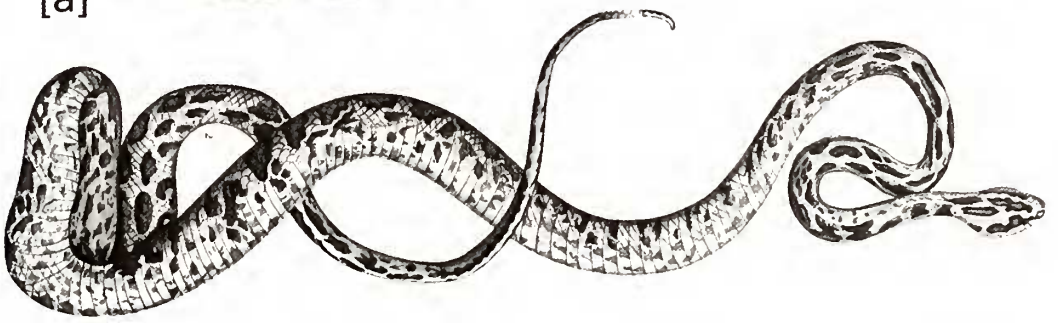
[a]



[b]

TABB. DCLIII. DCLIV. DCLV.

Mich. Cap. VII. verſ 17.

Puluerem in morem Serpentis lingent, ut quæ repunt in terra, & ex habitaculis ſuis contremiſcent, ante DOMINUM DEUM noſtrum pauebunt, & te timebunt.

Lingent puluerem ſicut ſerpens: velut reptilia terræ proturbabuntur de ædibus ſuis: DOMINUM DEUM noſtrum deſiderabunt,& timebunt te.

Vid. Gen. Cap. III. verſ. 14.

NEque hanc prætermitto occaſionem ſiſtendi Serpentes nonnullos ex *Herpetologia Linkiana*.

Fig. 1. Serpens Americanus cœruleus.

Fig. 2. Serpens Americanus ferrugineo dorſo, maculis per totam laterum longitudinem ſemilunatis nigricantibus; medio albis, ventre albido nigris punctis notato, capite ex ferrugineo & albo vario.

Serpens Americanus ferrugineis variis maculis nigris in dorſo, a latere iquamis ex umbra circulis albis ſemilunatis.

Hæmorrhous, Hæmorrhois, colore eſt arenoſo, per corpus verò notis nigris & albis variegata. *Actuar. Anic. Arab.* T. II. p. 138. *Lat.* IV. 6. 3. 36.

Fig. 3. Serpens Surinamenſis aquaticus ex nigro, cœruleo & albo varius, maculis præſertim in dorſo nigris, ſed variæ figuræ & magnitudinis.

Serpens vulgaris aquaticus Surinamenſis ex nigro & albo varius.

Albaris varii ſerpentis ſpecies. Giauhari.

Fig. 4. Tab. DCLIV. Serpens Americanus taeniatus, taeniis latioribus cupreis & anguſtioribus fordide albis.

Serpens Americanus annulis majoribus ex cupro & minoribus fordide albo.

Serpens minor Americanus variegatus, taeniis latioribus & annulis nigris.

Fig. 5. Dipſas Surinamenſis capite ex nigro, fuſco & albo vario, diademate ex punctis albis conſtante ornatus, collo ſuperne purpureo-fuſco, ad latera albo, femitaeniis dehinc per totam dorſi longitudinem alternis latioribus fuſco-purpureis, anguſtioribus dilutioris purpurae in maculas candidas terminatis, quae ſolae caudam praetentem longam nigricantem decorant: venter flaueſcit.

Dipſas Surinamenſis perbellè notatus.

Ἀσπὶς ὑποβρυχία μέλαινα ἄκρῳ τῷ οὐρᾷ.

Semper ſubobſcura nigricat extrema cauda.

Nicand. de Dipſade v. 337.

Dipſadi ſunt nigredinis veſtigia plurima, & color poſtremae partis vetus caudam ad nigredinem declinat. *Aucenna.*

Serpens albus in capite lineas habens coronae inſtar. *Damir.*

Serpens Americanus longus, craſſus, capite latiori, cauda tenui & longa. *Vinc. Cent.* III. 82.

Serpens Americanus longus, tenuis, capite craſſo, cauda tenui. *Vinc. Cent.* IV. 13.

Serpens Staturnenſis longiſſimus variegatus, capite plano & viperino, fuſco-marmoreo. *Vinc. Cent.* IV. 56.

Fig. 6. Tab. DCLV. Serpens Americanus ex luteo & griſeo (vel fuſco) in capite & collo veluti reticularus, reliquo corpore taeniatus, taeniis veluti fractis.

Ser-

[c]

[d]

Plate 5. **a.** Figure 8, plate 655 from *Physica Sacra* (Scheuchzer 1735). The Linck specimen illustrated is one of the syntypes of *Pseudoboa fasciatus* Schneider 1801 [= *Bungarus fasciatus*]. **b.** Figure 2, plate 657 from *Physica Sacra* (Scheuchzer 1735). The Linck specimen depicted is a syntype of *Dipsas multomaculata* Reinwardt in Boie 1827 [= *Boiga multomaculata*]. **c.** Bottom portion of p. 1296 from *Physica Sacra* (Scheuchzer 1735) showing Latin text related to plates DCLIII–DCLV, which illustrate Linck snakes. **d.** Specimen of *Lacerta marmoratus* = *Polychrus marmoratus* (I2003A$_3$) in the Naturalienkabinett Waldenburg on a red-labeled stand, signifiying its recognition as a Linck specimen by Wöpke in the 1933/34 reorganization of the collection.

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rem (1820) himself listed this image in his account of *Coluber fulgidus*. *Coluber* (*Natrix*) *Linkii*, another Merrem (1820) name, despite its patronymic epithet, was not associated with a Scheuchzer plate by its author.

Schneider's (1801) description of *Pseudoboa fasciatus* = *Bungarus fasciatus* is based in part on material in the Bloch collection (now part of the Museum für Naturkunde, Berlin) and in part on the Linck specimen illustrated on plate 655, figure 8 by Scheuchzer (1735; Plate 5a). Finally, *Dipsas multomaculata* Reinwardt in Boie, 1827 (= *Boiga multomaculata*) was described in part on the basis of the snake figured in Scheuchzer's plate 657, figure 2 (Plate 5b).

THE IDENTITY OF SNAKES FIGURED BY SCHEUCHZER

The identity of the snakes illustrated in Linck's *Icones* and Scheuchzer's *Physica Sacra* has never been adequately resolved. The identifications published by Linck (1783–1787) can only be considered tentative as they were Linck's best guesses based on those species known to Linnaeus at the time of the 12th edition of *Systema Naturae* (1766), which Linck used as his main source. Linnaeus's descriptions were often brief and Linck had no special training or knowledge of snakes, so the margin for error was great. Linck may also have been swayed in his identifications by the presumed geographic origin of the snakes. However, the stated origins of most specimens that reached natural history cabinets in the early to mid-18th century were mostly unreliable, as the material generally came through a series of intermediaries, often via Dutch commercial vessels that may have visited any of the main areas from which reptiles were exported, namely Suriname, the Cape, Ceylon, and the East Indies. In short, Linck's (1783–1787) identifications in the *Index* cannot be relied upon.

Information from Scheuchzer's (1735) text is likewise of little use in identifying the snakes of the Linck collection. It is possible that Johann Heinrich Linck the Elder had sent Scheuchzer some information about the specimens, such as their presumed places of origin, but Scheuchzer seems to have used a combination of classical sources as well as contemporary biological literature, including Hernandez (1651), Marcgrave (1648) and Piso (1658), Kaempfer (1712), Ray (1693), and Kolb (1719), amongst others, in order to provide text that was usually not particularly relevant to the particular snake figured (Plate 5c).

Thankfully, many of the plates in the *Icones* and *Physica Sacra* are lifelike enough that some hope of identification is possible on the basis of the images alone. Indeed, until the mid-19th century many herpetologists attempted to place Scheuchzer's images into the synonymies of the snakes then recognized (Table 2). Unfortunately for them, and for us, at the time that the plates were executed, the significance ventral and subcaudal scale counts, as first advocated by Linnaeus (1745 et seq.) and used by some other mid-18th century workers (e.g., Gronovius 1756), was not appreciated and so these useful pieces of information are not recorded in the images or in the text of the *Physica Sacra*. It was not until the work of Merrem (1790a, 1790b, 1809, 1810, 1821) that the utility of other scalation features, such as head scales and the condition of the anal plate was recognized and regularly figured accurately (Schmidtler 2006).

Because their scale counts could not be ascertained Linnaeus ignored many of the snakes illustrated by Scheuchzer, despite their otherwise largely accurate portrayal (Shaw 1802). However, other workers, many of whom had the benefit of having seen many snakes in other collections, attempted to place Scheuchzer's images into context (Table 2). Gronovius (1756) was the first to consistently reference Scheuchzer's (1735) images, but this work was

Plate 6. a. Match of (left) *Psammophylax rhombeatus* (I2022A$_3$) to (center) Scheuchzer (1735) plate 739, figure 7, and (right) *Icones* XXVI. Left and center images: A. M. Bauer. Right image courtesy of Universitätsbibliothek Leipzig. **b.** Match of (left) *Amphisbaena alba* (I2046A$_3$) to (top right) Scheuchzer (1735) plate 652, figure 1, and (bottom right) *Icones* XXXIV. Left and top right images: A. M. Bauer. Bottom right image courtesy of Universitätsbibliothek Leipzig.

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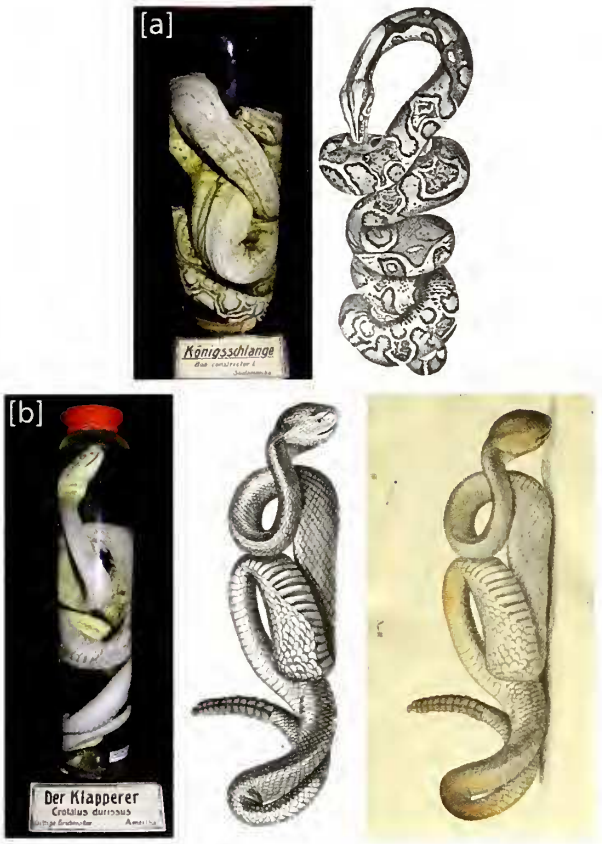

Plate 7. **a.** Match of (left) *Boa constrictor* (I2013A$_3$) to (right) Scheuchzer (1735) plate 746, figure 1. Photos: A. M. Bauer. **b.** Match of (left) *Crotalus durissus* (I2085A$_3$) to (center) Scheuchzer (1735) plate 738, figure 4, and (right) *Icones* XLII. Left and center images: A. M. Bauer. Right image courtesy of Universitätsbibliothek Leipzig.

itself pre-Linnaean and did not use binominal nomenclature. Selected images of Linck's snakes were subsequently cited by Linneaus (1758, 1766), Laurenti (1768), Gmelin (1789), La Cépède (1789), Bonnaterre (1790), Schneider (1801, 1821), Shaw (1802), and Daudin (1802a, 1802b, 1802c). Of these authors, only Schneider, who was based in eastern Germany and who had praised Linck and his collection (1792, 1797) is likely to have actually seen the specimens or perhaps at least the *Icones* (see footnotes Table 2). Merrem (1820) was the first author to formally place the majority of the Scheuchzer plates into the synonymy of recognized species. Boie (1827) in his critique of Merrem (1820) also commented on the identity of the Linck snakes. The most comprehensive evaluations of their identities, however, were made by Schlegel (1837) in his *Physionomie des Serpens*, a global review of snakes, and by Duméril & Bibron (1844) and Duméril et al. (1854a, 1854b) in *Erpétologie Générale*, the most detailed herpetological treatise produced to that time (Table 2). These authors largely agreed on identifications, although there were some differences of opinion and some images were regarded as being too imprecisely drawn to allow unambiguous identification.

We used the identifications of previous authors as a guideline for our own determinations of Scheuchzer's figures, but did not restrict our considerations to these taxa. We also compiled lists of possible subjects based on our own knowledge of snakes and obtained suggestions from a panel of colleagues (see Acknowledgements) with broad familiarity of snake systematics and identification. Ultimately our identifications as given in Table 2 were the result of comparisons of the plates with photographs and specimens of all candidate taxa compiled. In some instances no identifrication was possible. In a majority of cases we could confirm that the identifications of Duméril & Bibron (1844) and Dumćril et al. (1854a, 1854b) were correct. As predicted for an early 18th century reptile collection, virtually all of the specimens represent species occurring in parts of the world to which access was controlled by the Dutch, who were the source of most commercially traded exotic natural history objects at the time. In particular, the greatest part of the collection is represented by South American species that would likely have been collected in Suriname. However, South African (Cape) species, such as *Causus rhombeatus*, *Psammophylax rhombeatus*, and *Pseudaspis cana* are represented, as

Plate 8. **a.** Match of (left) *Boiga dendrophila* (I2068A$_3$) to (top center) Scheuchzer plate 662, figure 11, (bottom center) *Icones* XLV, (top right) Seba (1735) Plate 21, figure 1, and (bottom right) illustration in Shaw (1802). Bottom center image courtesy of Universitätsbibliothek Leipzig. All other images: A. M. Bauer **b.** Match of (left) *Helicops angulatus* (I2014A$_3$) to (right) *Icones* plate LXXXIII. Left photo: A. M. Bauer. Right image courtesy of Universitätsbibliothek Leipzig.

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are Sri Lankan (Ceylonese) snakes, including *Cylindrophis maculatus*, *Amphiesma stolatum*, and *Chrysopelia ornata*, and those from Indonesia (former Dutch East Indies), e.g., *Cylindrophis ruffus*, *Boiga dendrophila*, and *Homalopsis buccata*.

IDENTIFICATION OF ORIGINAL LINCK SPECIMENS

We examined the entire collection of the amphibian and reptile specimens present in the Waldenburg collection in 2005 and 2009. These are arranged chiefly in two glass-fronted wooden cabinets and are in numbered aisles 52, 53, 56 and 57. Additional specimens are on display in the Linck Room and in the stairwell between the two main floors of the building. Unfortunately, the specimen labels, including red labels meant to denote Linck specimens identified in the reorganization of the 1930s, are attached to small wooden bases on which the jars stand (Plate 5d). The jars are weakly glued to the bases and in some cases were loose and in many cases these bases were clearly associated with the wrong specimens. There are no tags or other identifiers associated with the specimens within. However, each jar bears a small, uniquely numbered label, added in the 1993/1994 reorganization of the collection. None of the specimens in the stairwell display case was associated with a numbered label or a labeled base nor were several of the dry preparations in the Linck Room. Photographs were taken for subsequent confirmation of identification and comparison with Scheuchzer's (1735) plates but these were of limited use as all fluid-preserved specimens were sealed with a glass plate and covered in picein from the 1993–94 inventory and reorganization, requiring that photos were taken through the glass. Identification methods were the same as for the Scheuchzer plate images (see above).

We examined the eight specimens that had been previously identified as deriving from the Linck collection by Konstantin Wöpke during his reorganization in the 1930s (Table 4). Because only snakes and other reduced limbed reptiles and amphibians (amphisbaenians and caecilians) were figured by Scheuchzer, we had no way of confirming the lizards indicated as being part of the original Linck collection. However, we compared all the snake and amphisbaenian specimens now present in the Waldenburg collection, including those without red labels, to the published plates of Scheuchzer and to the original illustrations prepared by Linck in the *Icones*. Linck's images and the Scheuchzer plates are consistent with one another with respect to the approximate body positions of the snakes figured and we believe these to be accurate representations of the specimens as they appeared to Linck. Thus, we considered specimens showing the same body positions and color patterns to be possible matches. We found plausible matches for three of the red-labeled specimens (*Ahaetulla prasina*; *Liophis lineatus*; *Psammophylax rhombeatus*, Plate 6a). In addition, seven specimens not indicated by Wöpke's red labeling were considered matches to Scheucher figures (*Amphisbaena alba*, Plate 6b; *Boa constrictor*, Plate 7a; *Croatalus durissus*, Plate 7b; *Boiga dendrophila*, Plate 8a; *Corallus hortulanus*; *Thamodynastes pallidus*; *Naja naja*) and one additional specimen corresponds to a plate in the unpublished *Icones* but was not subsequently illustrated in *Physica Sacra* (*Helicops angulatus*, Plate 8b). Thus, if our identifications are correct, 11 of the specimens illustrated in the *Icones* and 10 figured by Scheuchzer (1735) appear to be extant (Table 4). It is certainly possible that additional, unfigured specimens of spirit-preserved snakes, as well other reptiles and amphibians, both dry and in fluid, may also date from this time, but this cannot be confirmed based on the evidence available.

One of the surviving specimens, here identified as *Boiga dendrophila* (and more specifically as *B. d. occidentalis* by Wallach 2012), has long been a source of contention. Shaw (1802) noted that this same specimen was figured by Seba (1735, pl. 21, fig. 1) and by Scheuchzer (1735, pl. 630 [sic]) and reproduced the image himself (Plate 8a). Merrem (1821) correctly cited the image as plate 662, figure 11 in Scheuchzer and considered that the similarity of the figures indicated that one of the authors had plagiarized the other. He concluded that it is Seba who had copied without attribution and indeed accused Seba of lying in claiming that he had received the snake from "a friend with good standing in society, who greatly valued it." In fact, given that Linck had initially provided Seba with images of his snakes (see above), no plagiarism of Scheuchzer is implied, although it may be argued that Seba misrepresented the specimen figured as being part of his own collection. Johann Heinrich Linck the elder himself, felt ill-used by Seba, who kept Linck's snake illustrations for half a year and copied them in association with a planned co-authored work on snakes, but ultimately decided to publish on his own (Zentralbibliothek Zürich Ms. H 304).

THE OLDEST FLUID-PRESERVED HERPETOLOGICAL COLLECTIONS

The Linck collection is of both historical and taxonomic relevance. The majority of the specimens that can be associated with some assurance to the *Index* of the 1780s, the *Icones* watercolors in Leipzig, or the plates of the *Physica Sacra*, are important as links to one of the most important German herpetological collections of the 18th century. At least those 11 specimens that can be matched to the *Icones* and Scheuchzer's plates must have been in the Linck collection at least since 1729 (Linck noted in March

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1730 that Seba had kept the drawings of snakes he had sent from Easter to Michaelmas, presumably of the previous year; Zentralbibliothek Zürich Ms. H. 304) making them among the oldest fluid-preserved herpetological specimens in the world.

Nehemiah Grew (1641–1712) was one of the first to report on anatomical specimens preserved in fluid, among them some of Boyle's earliest preparations (Jahn 1994) – including a snake, in his catalogue of the Royal Society Museum (Grew 1681). Some of these specimens were still extant more than a century later (Dobson 1956), but much of the early spirit-preserved material is known to have degraded by the first third of the 19th century (Select Committee 1835; Whitehead 1969). An illustration, made in 1703, of the collection of Levinus Vencent (MacGregor 2007, fig. 51) clearly shows jars of spirit preserved specimens, amongst them lizards, turtles and frogs. Other large herpetological collections were assembled by James Petiver (1663–1718) and Theodor Jakob Klein (1685–1759), as well Sir Hans Sloane (1660–1753), who ultimately incorporated Petiver's collection into his own. However, no fluid-preserved herpetological specimens are believed to be extant from any of these collections (although records of what once existed in Sloane's collection are held by The Natural History Museum, London (Clutton-Brock 1994)).

Despite the relative stability of fluid-preserved specimens, most private herpetological collections dating to before the middle of the 18th century were eventually destroyed or greagtly diminished by fire, jar breakage, alcohol evaporation, or simply curatorial neglect or indifference. Royal or national collections fared somewhat better, as they were less likely to suffer some of these vicissitudes, but even the oldest of these, the Swedish Museum of Natural History (with collections dating from 1739), is younger than the Linck collection.

It is impossible to determine the actual age of the snakes figured in the *Physica Sacra* and today housed in the Naturalienkabinett Waldenburg, as no records exist that document any herpetological portion of the Linck collection prior to 1730, the year in which Scheuchzer's plates are believed to have been executed (Seifert 1934). However, the collection of snakes was large and well-known several years earlier (Kanold in Neickelius 1727) and it is certainly conceivable that some specimens could date back to the period of Heinrich Linck, and perhaps to as early as the 1680s, by which time spirit-preservation of reptiles had become common.

A similar lack of temporal precision applies to the few other collections of comparable age. Thus, specimens in the collection of the Franckesche Stiftungen in Halle, despite its late 17th century origins, cannot be accurately dated beyond 1736, when Gotfried August Gründler (1710–1775) catalogued and reorganized the existing collection there. The Seba collection likewise can only be dated approximately, with specimens having been obtained between 1716, the year of the sale of Seba's first collection (of which no spirit-preserved material is known to survive), and about 1735, the year in which the second of the two volumes of Seba's *Thesaurus* that contain herpetological specimens was published. The surviving material from all three collections could therefore be approximately the same age, but the material from the Linck collection can be explicitly proven to date to at least 1729 (versus 1736 for specimens in Halle and 1734–35 for the now scattered specimens from Seba's collection) and has the potential for the greatest possible age, given that Heinrich Linck began his collection more than 25 years before the foundation of the Franckesche Stiftungen, when Albertus Seba was only a child.

Unfortunately, none of the type specimens from the Linck collection appear to be among the surviving specimens in Waldenburg. Even if all of the putative Linck specimens identified by Wöpke are among the extant specimens and the majority of other herpetoloigical specimens also date from at least the time of Johann Heinrich Linck the Younger, it is clear that the vast majority of this once massive collection has been lost or destroyed over the years. It is probable that many were either sold by Rhode prior to the purchase of the rest of the collection by Otto Victor and have subsequently become lost or destroyed, or that they deteriorated and were destroyed at some point prior to the collection reorganization of the 1930s. Indeed, the value of such historical specimens was generally not appreciated until late in the 19th century, resulting in extensive losses in the name of curation (Steinheimer 2005). There is a remote possibility that additional specimens illustrated by Scheuchzer (1735) and therefore dating from the time of Johann Heinrich Linck the Elder, potentially even some of the missing types, may yet be identified if specimens sold by Rohde can be identified in other collections.

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APPENDIX

Table 1. Herpetological material in the Linck collection as listed in the *Index Musae Linckiani* (1783–1787). Binominal names used in the *Index* are from the 12th edition of the *Systema Naturae* (Linnaeus 1766) and reflect the identifications of Johann Heinrich Linck the Younger. Specimens differing from the typical named forms in size, color, or provenance were listed by Linck immediately following the species they most closely resembled. *Index* page refers to the volume (I: 1783; III: 1787) and page number in the *Index* upon which each species or variety account begins. Specimen numbers alone refer to spirit-preserved material, "aufgeh." (aufgehängt = hung) or "trocken (= dry) aufgeh." refers to preparations hanging on a wall or from the ceiling, "Schubl." refers to dry preparations in drawers (Schubladen). Linck provided citations to the corresponding page number in Linnaeus (1766), as well as to corresponding images in Scheuchzer (1735; see Table 2), Seba (I: 1734, II: 1735), and Müller (as Müll. or Müllers Ueb. or Uebers.; III: 1774, Suppl.: 1776) and mentions in Ray (1693) and Laurenti (1768). Information in this table may be cross-referenced with that in Table 2 by comparing the **Specimen numbers** columns.

***Index* name**	***Index* Page**	**Specimen numbers**	**Linnaeus 1766**	**Other Citations**
Testudo coriacea	I:61	aufgeh. 98, 25, Schubl. No. 6	350	
Testudo imbricata	I:61	aufgeh. 100a	350	
Testudo mydas	I:61	trocken aufgeh. 95, 96	350	
Desgl. eine von der nemlichen Art, aber kleiner	I:61	326, 327, trocken aufgeh. 97		
Testudo orbicularis	I:61	25 Schubl. No. 5	351	
Desgl. nur die Oberschaale	I:61	aufgeh. 100b		
Testudo scabra	I:61	25 Schubl. No. 4, aufgeh. 100	351	
Testudo scorpioides	I:61	aufgeh. 99	352	
Testudo graeca	I:62	25 Schubl. No. 2	352	
Testudo carolina	I:62	25 Schubl. No. 8	352	
Testudo geometrica	I:62	25 Schubl. No. 1,3	353	Müllers Uebers. T. III. T. XII, f. 1
Noch eine Verschiedenheit von der *Geometrica*	I:62	25 Schubl. No. 9	353	
Testudo pusilla	I:62	25 Schubl. No. 7	353	
Rana pipa	I:62	322–325	354	Müllers Ueb. T. III. T. XII, f. 2
Desgleichen ein Exemplar woran man die aufgesprungenen Eyer recht genau beobachten kann	I:62	321		
Rana musica	I:62	303	354	
Rana bufo	I:62	320	354	
Rana gibbosa	I:63	310, 311, 319	355	Seb. II, 37-3
Rana bombina	I:63	312	355	
Rana ventricosa	I:63	309	355	
Ein kleinerer	I:63	318		
Rana marina Americana	I:63	316	356	
Rana ocellata	I:63	315	356	Seb. I, 76-1
Rana marginata	I:63	297	356	
Rana paradoxa	I:63	293, 294, 294A–C	356	Seb. I, 78-6,16,21
Rana temporaria	I:63	302	357	
Rana arborea	I:63	295, 296, 298–301, 305, 306; 27 Schubl. No. 5	357	
Dergleichen ein ganz großer weißer Surinamischer Laubfrosch	I:63	307		
Einer dergleichen mit einem Fusse	I:63	304		
Rana boans	I:64	308	358	
Dergleichen Art aus Surinam	I:64	313		
Dergleichen aus Brasilien	I:64	314		
Dergleichen aus Carolina	I:64	317		Phil. Trans. 210:215
Draco volans	I:64	439–442, 27 Schubl. No. 2	358	Müllers Ueb. T. III. T. I, f. 4
Desgleichen die Amerikanische fliegende Eidechse	I:64	443–447	358	Müllers Ueb. T. III. T. I, f. 5

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Index name	*Index* Page	Specimen numbers	Linnaeus 1766	Other Citations
Lacerta crocodilus	I:64	328–334, 336, 340	359	Seb. I, 103, 104, 106
Dergl. noch einige junge afrik. Krocodile	I:65	335, 337–339		
Lacerta superciliosa	I:65	72, 374, 449, 450	360	Seb. I, I-9-24
Lacerta monitor	I:65	343–349	360	Seb. I, 94-1-3
Lacerta principalis	I:65	417	360	
Lacerta cordylus	I:65	341, 391, 393	361	
Desgl. Aus Amerika	I:65	392, 27 Schubl. No. 7		
Lacerta mauritanica	I:66	458	361	
Lacerta azurea	I:66	342	362	Seb. II, 62-6, 97-4
Lacerta turcica	I:66	456	362	
Lacerta ameiva	I:66	376-384, 384, 412, 419, 27 Schubl.	362	Seb. I, 88-2
Desgl. eine mit getheilten Schwanze	I:66	398		
Desgl. eine Verschiedenheit	I:66	394, 395, 413		Seb. I, 85-2-4, 86-4
Lacerta agilis	I:66	375, 397, 403–405, 407, 418, 428, 429	363	Seb. II, 79-5, 4-5
Desgl. mit einem länglichen Auswuchse auf der Oberseite des Schwanzes	I:66	386		
Lacerta seps	I:66	399	363	
Lacerta de taletec. min. mas et foem.	I:66	409, 410		Seb. I, 79-1
Noch eine Amerikanische	I:67	406, 27 Schubl.		Seb. I, 92-5
Lacerta chamaeleon	I:67	433, 435, 436, 438, 438A, 27 Schubl. No. 3	364	Seb. I, 82-I-5, 83-5
Dergl. Ein Exemplar aus Morea	I:67	437		
Lacerta gecko	I:67	452, 455, 457, 459–461, 27 Schubl. No. 6	365	Seb. I, 108
Lacerta stincus	I:67	400–402	365	Seb. I, 105-3
Lacerta orbicularis	I:67	424, 451	365	Seb. I, 109-6
Lacerta ypsilon	I:68	290A		
Lacerta iguana	I:68	350, 351, 353–363	366	Seb. I, 96-4,5, 97-3, 98-1
Lacerta calotes	I:68	364–371, 373, 396	367	
Lacerta agama	I:68	448	367	Seb. I, 107-1-3
Lacerta marmorata	I:68	385, 387–390, 414–416, 434	368	Seb. II, 76-4
Lacerta teguixin	I:68	420, 421, 423, 425–427	368	
Die größte *Teguixin*	I:68	352		
Lacerta punctata	I:68	430, 432	369	
Lacerta chalcides	I:69	431	369	
Lacerta lemniscata	I:69	408, 422	369	
Lacerta arguta	I:69	411		Müll. Uebers. im Suppl. Bande p. 188.41.A)
Noch verschiedene Eidechsen	I:69	264, 579, 27 Schubl. No. 1, 4		
Lacerta aquatica	I:69	453	370	Seb. II, 12-7
Lacerta palustris	I:69	454	370	Seb. I, 89-4,5
Lacerta salamandra	I:69	462–468	371	Seb. II, 15-5
Crotalus miliaris Lin.	I:70	469	372	
Crotalus dryinas Lin.	I:70	563	372	Seb. II 95-3
Crotalus durissus Lin.	I:70	553	372	Seb. II 95-2
Boa hipnale Lin.	I:70	671	373	Seb. II 34-2
Boa constrictor Lin.	I:71	669–670	373	
Boa hortulana Lin.	I:71	661–662	374	
Eine mit braunen Bändern	I:71	488		
Coluber vipera Lin.	I:71	552	375	
Coluber atropos Lin.	I:71	540	375	
Coluber plicatilis Lin.	I:71	564	376	
Coluber domicella Lin.	I:71	530	376	
Coluber buccatus Lin.	I:72	651–652	377	
Coluber berus Lin.	I:72	609	377	
Desgl. die surinamische Natter	I:72	499		
Coluber angulatus Lin.	I:72	502	377	
Eine aus Ceylon dergl.	I:72	503, 654		

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Index name	*Index* Page	Specimen numbers	Linnaeus 1766	Other Citations
Coluber aspis Lin.	I:72	690	378	
Coluber lebetinus Lin.	I:72	576	378	
Coluber melanocephalus Lin.	I:72	574–575, 578, 673	378	
Coluber reginae Lin.	I:72	580–581	378	
Coluber severus Lin.	I:73	668	379	
Coluber aurora Lin.	I:73	565	379	
Coluber stolatus Lin.	I:73	679	379	
Coluber vittatus Lin.	I:73	676–678	380	Seb. T. 661.8[1]
Coluber aesculapii Lin.	I:73	483–484	380	
Desgl. aus Afrika	I:73	491, 493–494, 587		
Desgl. Eine sehr grosse dieser Art	I:73	649		
Desgl. noch verschiedene	I:73	486–487, 560		
Noch eine Verschiedenheit	I:73	485, 592		
Coluber rhombeatus Lin.	I:73	482, 562	380	
Coluber cyaneus Lin.	I:73	635–636	380	
Coluber natrix Lin.	I:73	473	380	Seb. II. 35-4
Dergl. eine aus Surinam	I:74	475–481, 542		
Dergl. kleinere	I:74	548–549, 554, 556–558, 614, 680		
Dergl. vom Vorgeb. der guten Hoffnung viel verschiedene Arten	I:74	471–472, 500–501, 504–508, 520–529, 531, 537, 539, 545–547, 666, 681–683	375	
Coluber agilis Lin.	I:74	655	381	
Coluber lacteus Lin.	I:74	534	381	
Coluber jaculatrix Lin.	I:74	643	381	
Coluber pallidus Lin.	I:74	519, 536, 566	381	
Coluber lineatus Lin.	I:74	551, 642, 644	382	
Coluber naja Lin.	I:74	645	382	Seb. II. 94-1
Dergl. noch verschiedene	I:74	646–648		Seb. I. 44-1
Coluber padera Lin.	I:75	689	382	
Coluber canus Lin.	I:75	541, 573	382	
Coluber sibilans Lin.	I:75	685	383	
Coluber atrox Lin.	I:75	538	383	
Coluber nebulatus Lin.	I:75	509–512, 516–517	383	
Dergl. kleinere	I:75	513–514		
Coluber fuscus Lin.	I:75	664–665	383	
Dergleichen von heller Farbe	I:75	474		
Dergleichen von brauner Farbe	I:75	470		
Coluber saturninus Lin.	I:75	561	384	Seb. II. 1-8
Coluber corallinus Lin.	I:75	24 Schubl. No. 2	384	
Coluber exoletus Lin.	I:75	638	385	
Coluber lemniscatus Lin.	I:76	495, 585–586	386	
Coluber annulatus Lin.	I:76	535, 695	386	
Dergl. Eine Varietaet von der Annulata	I:76	686		
Coluber aestivus Lin.	I:76	633	387	
Coluber ahaetulla Lin.	I:76	618–628, 637	387	
Eine dergl. Kleine Art mit schwarzen Flecken	I:76	629		
Coluber petalarius Lin.	I:76	496	387	Seb. II. 16-2
Coluber haie Lin.	I:76	684[2]	387	
Coluber dipsas	[I:76]	[684] [2]		
Coluber filiformis Lin.	I:76	640	388	
Coluber pullatus Lin.	I:76	667	388	
Coluber hippocrepis Lin.	I:76	543, 567–568	388	
Coluber cinereus Lin.	I:76	555	388	
Coluber mucosus Lin.	I:77	641	388	
Coluber cenchoa Lin.	I:77	656, 663, 688, 691	389	
Noch dergl. verschiedene	I:77	515, 653, 657–660		
Dergl. eine Varietät	I:77	692–694, 696		
Coluber mycterizans Lin.	I:77	631	389	
Dergl. Pfirschblüthfarbne, aus Ceylon	I:77	616–617		
Dergl. große blaue und grüne	I:77	634		
Dergl. ganz dunkelblaue	I:77	639		

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Index name	*Index* Page	Specimen numbers	Linnaeus 1766	Other Citations
Eine, welche die schönsten Farben wie ein Opal spielt, aus Surinam	I:77	630, 632		
Coluber coerulescens Lin.?	I:77	675	389	
Coluber reticulatus	I:77	533		
Coluber, s *Vipera maculata*	I:77	672		Laurenti ?
Coluber, s. *Vipera americana, variis characteribus orientalibus inscriptus*	I:77	518		Raj [Ray]
Noch verschiedene Nattern, vom Capite bonae spei	I:78	569		
Noch verschiedene Arten aus verschiedenen Ländern	I:78	492, 532, 544, 550, 570, 24 Schubl.		
Anguis meleagris Lin.	I:78	572	350	Seb. II. 21-4
Anguis maculata Lin.	I:78	599	391	
Anguis reticulata Lin.	I:78	608	391	
Anguis laticauda Lin.	I:78	559	392	Seb. II. 30-3
Anguis scytale Lin.	I:78	489–490, 582–584	392	
Dergleichen etwas kleiner	I:78	497–498, 588–590		
Dergleichen noch kleiner	I:78	591, 611–612		
Noch eine Verschiedenheit aus Amerika	I:79	593–595		
Anguis americ. ex albo sub nigro tessellatus	I:79	600, 650		
Anguis eryx Lin.	I:79	610	392	
Anguis fragilis Lin.	I:79	577, 687	392	
Amphisbaena fuliginosa Lin.	I:79	596–598, 615	392	
Dergleichen	I:79	601–606		
Amphisbaena alba Lin.	I:79	607	393	
Caecilia tentaculata Lin.	I:79	571, 613	393	Seb. II. 25-2
exuvia boae contortricis	I:80	aufgeh. 102		
exuvia boae contortricis	I:80	aufgeh. 101		Seb. I. 53-1
exuvia boae contortricis	I:80	127 Schubl.		
coronae serpentis	I:80	175 Schubl. No. 6		
lapidees serpentini magnetici	I:80	175 Schubl. No. 8		
spina dorsalis serpentis	I:80	175 Schubl. No. 4		
ova serpentis	I:80	697A		Seb. I. 7
ova serpentis	I:80	17 oder 18 Schubl.		
ova lacertae crocodilli	I:81	17 Schubl. No. 4		
ova testudinis	I:81	17 Schubl. No. 5		
Coluber coerulescens Lin.	I:276, III:248	674		
Coluber aspis aegyptiaca	III:248	818		Seb. II.188-1 [sic, prob. 88-1]
Coluber Indicus putorius gryseo-luteus	III:248	817		

[1]This reference to Seba by Linck is a lapsus or printer's error. The "661.8" actually corresponds to the plate (661) and figure (8) in Scheuchzer (1735) and the intended citation would have been "Sch. T. (Tafel = plate) 661.8".
[2]In the University of Leipzig copy of the *Index* annotated by J. H. Linck the Younger specimen number 684 is crossed-out in association with *Coluber haie* and a note has been added on the facing blank page indicating that this specimen should be associated with *Coluber dipsas*, figure 5 on plate 738 in Scheuchzer (1735).

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Table 2. Identification of the snakes and amphisbaenians illustrated in Scheuchzer's *Physica Sacra. Icones* Roman numeral plate numbers correspond to Arabic numeral 'Mus. Linck.' numbers that appear on the published plates in Scheuchzer (1735). Gronovius (1756), Merrem (1820), Schlegel (1837), Duméril & Bibron (1844), and Duméril et al. (1854a, 1854b) provided the greatest number of citations to Scheuchzer's plates. Other citations from the period 1758–1858 are summarized by name employed. 'Current Identification' reflects the authors' best interpretation of the identity of Scheuchzer images based on extensive comparisons with specimens and photographs (see text). Current names in bold are specimens positively identified as appearing in the corresponding Scheuchzer plate. Information in this table may be cross-referenced with that in Table 1 by comparing the **Specimen numbers** columns.

Physica **Plate-Fig.**	***Sacra*** **Text pages**	***Icones*** **Plate n°**	***Index*** **Specimen n°**	**Gronovius (1756)**	**Merrem (1820)**	**Schlegel (1837)**	**Duméril & Bibron (1844) Duméril et al. (1854a,1854b)**	**Other Identifications**	**Identifications of Image**
606-A	1087	LXV	817	44	*Boa murina*	*Boa murina*	*Eunectes murinus*	*Boa murina* (Schneider 1801, 1821; Daudin 1802a; Merrem 1810)	*Eunectes murinus*
606-B	1087	LXVII (part)[1]		5	*Tortrix maculata*	*Tortrix maculata*	*Cylindrophis maculata*	*Anguis maculatus* (Schneider 1801; Daudin 1802c)	*Cylindrophis maculatus*
606-C	1087	LXVII (part)		13	*Coluber* (*Natrix*) *ornatus*	*Dendrophis ornata*	*Chrysopelea ornata*	*Chrysopelea ornata* (Boie 1827; Wagler 1830; Günther 1858); *Leptophis ornatus* (Cantor 1847)	*Chrysopelia ornata*
628-A	1178–79	XI	475–481, 542		*Coronella reginae*	*Liophis reginae*			*Liophis reginae*
628-B[2]	1179	LVI	582	4	*Tortrix scytale*		*Tortrix scytale*	*Anguis corallinus* (Schneider 1801; Daudin 1802c); *Tortrix scytale* (Gray 1849)	*Anilius scytale*
628-C	1179	XXXVII	609		*Pelias Berus*				*Vipera berus*
628-D[3]	1179	XV	601–606[4]	2	*Amphisbena fuliginosa*		*Amphisbaena fuliginosa*	*Amphisbaena fuliginosa* (Bonnaterre 1790; Schneider 1801)	*Amphisbaena fuliginosa*
628-E	1179–80	X	671		*Boa canina*	*Boa canina*	*Xiphosoma caninum*	*Boa isebequensis* (Bonnaterre 1790); *Boa hypnale* (Schneider 1801, 1821; Daudin 1802a); *Boa aboma* (Daudin 1802a); *Xiphosoma caninum* (Gray 1849)	*Corallus caninus*
629-F	1180	XXX	600, 650		*Tortrix rufa*	*Tortrix rufa*	*Cylindrophis rufa*	*Anguis rufus* (Schneider 1801); *Tortrix rufa* (Boie 1827); *Cylindrophis rufa* (Gray 1849)	*Cylindrophis ruffus*
629-G[5]	1180	LV	643			*Dendrophis picta*	*Dendrophis picta*	*Coluber gliricapa* (Bonnaterre 1790); *Dendrophis pictus* (Boie 1827)	*Dendrelaphis pictus*
630-A[6]	1180	XL	530, 616, 617	19	*Coluber (Natrix) fulgidis*	*Dryophis* sp.	*Tragops prasinus*		*Oxybelis fulgidus*
630-B[7]	1180	L	502		*Coluber (Natrix) angulatus*	*Helicops angulata*	*Helicops angulatus*	*Coluber angulatus* (Merrem 1821); *Uranops angulatus* (Gray 1849)	*Helicops angulatus*
647-1	1283	XXIX	533		*Scytale Scheuchzeri*	*Tortrix rufa*	*Cylindrophis rufa*	*Tortrix rufa* (Boie 1827); *Cylindrophis rufa* (Gray 1849)	*Cylindrophis ruffus*
647-2[8]	1283	XXXIX	518			*Lycodon audax*	*Lycognathus scolopax*		*Siphlophis cervinus*
647-3	1283	LIX	not in *Index*			*Dipsas catesbyi* ?			*Dipsas variegata*?
648-1	1286	XXIV	553	45	*Cophias Jararaca*	*Crotalus* sp.	*Bothrops jararaca*	*Crotalus horridus* (Boie 1827)	*Crotalus durissus*
648-2[9]	1286	LVIII	485, 592		*Elaps corallinus*	*Elaps lemniscatus*	*Erythrolamprus venustissimus* *Elaps lemniscatus*	*Elaps lemniscatus* (Günther 1858)	*Oxyrhopus* sp.?
652-1[10]	1295	XXXIV	607		*Amphisbaena alba*		*Amphisbaena alba*	*Amphisbaena alba* (Gmelin 1789; Schneider 1801)	***Amphisbaena alba***

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Physica Plate-Fig.	*Sacra* Text pages	*Icones* Plate n°	*Index* Specimen n°	Gronovius (1756)	Merrem (1820)	Schlegel (1837)	Duméril & Bibron (1844) Duméril et al. (1854a,1854b)	Other Identifications	Identifications of Image
652-2	1295	LXIII	535, 695	17	*Coluber (Natrix) annulatus*	*Dipsas annulata*	*Dipsas annulata*	*Coluber purpurascens* (Bonnaterre 1790); *Leptodeira annulata* (Günther 1858)	*Leptodeira annulata*
653-1[11]	1296	XVIII	635, 636		*Coluber (Natrix) viridissimus*	? *Herpetodryas* sp.			*Philodryas viridissima*
653-2	1296	XX	564		*Coluber (Natrix) plicatilis*	*Homalopsis plicatilis*	*Calopisma plicitile*	*Elaps plicatilis* (Schneider 1801); *Coluber plicatilis* (Merrem 1821)	*Pseudoeryx plicatilis*
653-3[12]	1296	XXI	499			*Helicops angulata?*	*Helicops angulatus*	*Uranops angulatus* (Gray 1849)	?
654-4	1296	XXVII	486, 487, 560		*Coluber (Natrix) agilis*	*Coronella venustissima*	*Erythrolampus aesculapii*	*Coluber agilis* (Merrem 1821)	*Erythrolamprus aesculapii*
654-5	1296	LIV	541, 573			*Lycodon petolarius*	*Dipsadomorphus indicus*	*Coluber aesculapii* (Gmelin 1789)	*Dipsas indica*
655-6	1296–97	VII	672				*Lycodon aulicum*		*Lycodon aulicus* ?
655-7	1297	XIII	631			*Dryophis* sp.			***Ahaetulla prasina***
655-8.	1297	XXII	488		*Bungarus annularis*	*Bungarus annularis*	*Bungarus annularis*	*Pseudoboa fasciata* (Schneider 1801, 1821); *Bungarus annularis* (Daudin 1802a); *Bungarus fasciatus* (Cantor 1847; Günther 1858)	*Bungarus fasciatus*
657-1	1302	XVI	618–628, 637						?
657-2	1302	XXV	534			*Dipsas multimaculata*	*Dipsas multimaculata*	*Elaps lacteus* (Schneider 1801); *Dipsas multomaculata* (Boie 1827); *Dipsas multimaculata* (Cantor 1847)	*Boiga multomaculata*
660-1	1311	I	651, 652	25	*Vipera (Echidna) semifasciata*	*Homalopsis buccata*	*Homalopsis buccata*	*Homalopsis buccata* (Cantor 1847)	*Homalopsis buccata*
660-2	1311	II	not in *Index*						?
660-3[13]	1311	III	593–595[14]			*Tortrix maculata*	*Cylindrophis rufa*	*Amphisbaena alba* (Bonnaterre 1790); *Tortrix rufa* (Boie 1827)	*Cylindrophis ruffus*
660-4[15]	1311	IV	556						?
660-5[16]	1311	V	471, 472, 501, 504–507, 520–529, 531, 537, 539, 545–547, 666, 681–683[17]			*Coronella cobella*	*Liophis cobella*	*Coluber cobella* (Merrem 1821)	*Liophis reginae*
660-6	1311–12	VI	515, 653, 657–660			*Dipsas catesbyi*			*Dipsas catesbeii* ?
660-7[18]	1312	IX	668		*Coluber (Natrix) versicolor*	*Xenodon severus*	*Xenodon severus*	*Coluber guineensis* (Bonnaterre 1790); *Ophis severus* (Wagler 1830)	*Xenodon severus*
661-8[19]	1312	XIV	676–678	31	*Coluber (Natrix) vittatus*	*Tropidonotus vittatus*	*Tropidonotus vittatus*	*Tropidonotus vittatus* (Günther 1858)	*Xenochrophis vittatus*
661-9	1312	XVII	661		*Boa hortulana*	*Boa hortulana*		*Boa hortulana* (Schneider 1801; Daudin 1802a); *Corallus hortulanus* (Gray 1849)	***Corallus hortulanus***
662-10	1312	XXXVI	685			*Homalopsis plicatilis* ?			?
662-11[20]	1312	XLV	538	12	*Coluber (Natrix) Caninana*	*Dipsas dendrophila*	*Triglyphodon dendrophilum; Spilotes variabilis*	*Coluber Peruvianus* (Shaw 1802); *Coluber pantherinus* (Merrem 1821); *Dipsas dendrophila* (Boie 1827; Cantor 1847; Günther 1858); *Spilotes variabilis* (Günther 1858)	***Boiga dendrophila***

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Physica Plate-Fig.	*Sacra* Text pages	*Icones* Plate n°	*Index* Specimen n°	Gronovius (1756)	Merrem (1820)	Schlegel (1837)	Duméril & Bibron (1844) Duméril et al. (1854a,1854b)	Other Identifications	Identifications of Image
678-1	1346	VIII	519, 536, 566			*Dipsas punctatissima*	*Dipsas punctatissima*		***Thamnodynastes pallidus?***
678-2	1346	XXXII[21]	591, 611, 612	4	*Tortrix scytale*	*Tortrix scytale*	*Tortrix scytale*	*Tortrix scytale* (Gray 1849)	*Anilius scytale*
678.3	1347	XLIX	656, 663, 688, 691		*Coluber (Natrix) cenchoa*	*Dipsas weigelii*	*Imantodes cenchoa*	*Dipsas cenchoa* (Günther 1858)	*Imantodes cenchoa*
678-4	1347	LX	679		? *Coluber (Natrix) stolatus*				*Amphiesma stolatum*
715-1	1429–30	XIX	565						*Enhydris enhydris*
715-2	1430	LIII	551, 642, 644	26	*Coluber (Natrix) lineatus*		*Dromicus lineatus*	*Coluber jaculatrix* (Gmelin 1789); *Coluber jaculus* (Daudin 1802c); *Dromicus lineatus* (Günther 1858)	***Liophis lineatus***
717-1[22]	1431	XXVIII	552			*Naja rhombeata*	*Causus rhombeatus*		*Causus rhombeatus*
717-2	1431	XLI	634		*Coluber (Natrix) fulgidis*		*Dryinus nasutus*		*Ahaetulla nasuta*
737-1	1493	XII	483, 484	10	*Scytale anguiformis;* ? *Elaps corallinus*	*Coronella venustissima*	*Erythrolamprus vensustissimus; Erythrolampus aesculapii*	*Boa scytale* (Linnaeus 1758, 1766; Gmelin 1789; Lacépède 1789; Schneider 1801; Daudin 1802a; Shaw 1802); *Anguis scutata* (Laurenti 1768; Gmelin 1789)	*Erythrolamprus aesculapii* ?
737-2	1493	XXXV	574, 575, 578, 673		*Scytale coronata*		*Brachyruton cloelia*		*Clelia clelia* ?
737-3	1493	LXI	684[23]		*Coluber (Natrix) rhombeatus*	*Helicops angulata* ?	*Helicops angulatus*	*Elaps triangularis* (Boie 1827); *Uranops angulatus* (Gray 1849)	*Helicops angulatus* ?
738-4[24]	1493	XLIII	563		*Crotalus Dryinas*	*Crotalus* sp.			***Crotalus durissus***
738-5	1493	XLVII	[684][23]			*Coronella cobella*	*Liophis cobella*		*Liophis cobella* ?
738-6	1493–94	LVII	500, 508	32		*Coronella reginae*	*Liophis reginae, Liophis cobella*		*Liophis reginae*
739-7	1493–94	XXVI	482, 562			*Coronella rhombeata*	*Dipsas rhombeata*	*Coronella rhombeata* (Boie 1827)	***Psammophylax rhombeatus***
739-8	1493–94	XLVIII	692–694, 696		*Coluber (Natrix) Catesbeii*	*Dipsas catesbyi*	*Stremmatognathus catesbyii*	*Dipsas catesbeii* (Boie 1827)	*Dipsas catesbeii*
746-1	1532	XLIV	669, 670	43	*Boa constrictor*	*Boa constrictor*	*Boa constrictor*	*Boa constrictrix* (Schneider 1801); *Boa constrictor* (Merrem 1821; Gray 1849)	***Boa constrictor***
746-2	1532	XLVI	675		*Coluber (Natrix) cancellatus*	*Coronella reginae*	*Liophis reginae, Liophis merremii*	*Coluber rhombeatus* (Gmelin 1789; Daudin 1802c); *Coluber atro-reticulata* (Bonnaterre 1790); *Coluber crassicaudatus* (Boie 1827)	*Liophis miliaris* ?
747-3	1532	XXIII	667	12	? *Coluber (Natrix) Maximiliani*	*Coluber variabilis*	*Spilotes variabilis*	*Spilotes variabilis* (Günther 1858)	*Spilotes pullatus*
747-4[25]	1532	XXXIII	608	7	*Tortrix reticulata*	*Typhlops lumbricalis*	*Typhlops reticulatus*	*Anguis reticulatus* (Linnaeus 1758, 1766; Gmelin 1789; Schneider 1801; Daudin 1802c); *Typhlops lumbricalis* (Boie 1827)	*Typhlops reticulatus*
747-5	1532	LXIV	543, 567, 568			*Coluber canus*		*Coluber margaritaceus* (Merrem 1821); *Coronella cana* (Günther 1858)	*Pseudaspis cana*

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Physica Plate-Fig.	*Sacra* Text pages	*Icones* Plate n°	*Index* Specimen n°	Gronovius (1756)	Merrem (1820)	Schlegel (1837)	Duméril & Bibron (1844) Duméril et al. (1854a,1854b)	Other Identifications	Identifications of Image
748-6	1532	XXXI	599		*Tortrix rufa*	*Tortrix rufa*	*Tortrix rufa*	*Amphisbaena fuliginosa* (Bonnaterre 1790); *Anguis rufus* (Schneider 1801); *Eryx rufus* (Daudin 1802c); *Cylindrophis rufa* (Gray 1849)	*Cylindrophis ruffus*
748-7	1532	XXXVIII	655			*Lycodon petolarius*	*Oxyrhopus bipraeocularis*		*Lycodon aulicus* ?
748-8	1532	LII	509–512, 516, 517		*Coluber (Natrix) nebulatus*	*Dipsas nebulata*	*Petalognathus nebulatus*	*Coluber zeylonicus* (Gmelin 1789; Daudin 1802b); *Coluber nebulatus* (Merrem 1821)	*Sibon nebulata*
749-9	1532–33	XLII	646–648[26]		*Naia tripudians*	*Naja tripudiians*		*Coluber naja* (Bonnaterre 1790); *Naja tripudians* (Günther 1858)	***Naja naja***
749-10[27]	1533	LI	596–598, 615 2		*Amphisbena fuliginosa*		*Amphisbaenia fuliginosa*	*Amphisbaeba fuliginosa* (Bonnaterre 1790; Schneider 1801)	*Amphisbaena fuliginosa*
749-11	1533	LXII	540		*Coplias trigonocephalus*		*Bothrops nigro-marginatus*	*Megaera trigonocephala* (Gray 1849); *Trigonocephalus hypnale* (Gray 1849)	*Hypnale* sp. ?

[1]*Icones* plate LXVI is incorrectly cited on Scheuchzer's (1735) plate 606 as the source of image B instead of plate LXVII.
[2]This figure is not cross-referenced in the *Index*. Schneider (1801) and Daudin (1802) erroneously cite this figure as 268-B and the 'Mus. Linck.' number (= *Icones* plate) as 54 instead of 56.
[3]This figure is incorrectly cited as 628B by Bonnaterre (1790) and as 1129D by Duméril & Bibron (1844).
[4]The *Icones* plate references only specimens 601 and 602.
[5]This figure is incorrectly cited in the *Index* as 629-9 and by Bonnaterre (1790) and Boie (1827) as 629-6.
[6]In the *Index* plate 630, figure A is attributed to two different species: *Coluber domicella* (530) and *C. mycterizans* Dergl. Pfrischblüthfarbne, aus Ceylon (616, 617).
[7]Incorrectly cited as 360-B by Duméril et al. (1854a).
[8]Incorrectly cited as 647-1 by Duméril et al. (1854b).
[9]Incorrectly cited as 648-4 by Günther (1858).
[10]Incorrectly cited as figure 1152-1 by Duméril & Bibron (1844).
[11]Incorrectly cited as 647-1 by Schlegel (1837).
[12]Incorrectly cited as 630-3 by Duméril et al. (1854a).
[13]Incorrectly cited as 66-3 by Bonnaterre (1790) and as 660-1 by Boie (1827).
[14]The *Icones* plate references only specimens 593 and 595.
[15]This plate is not cross-referenced in the *Index*.
[16]This figure was incorrectly cited as 660-4 by Merrem (1821).
[17]The *Icones* plate references only specimens 471 and 472.
[18]Incorrectly cited as 640-7 by Merrem (this figure is incorrectly cited as Seb. (= Seba) T. 661-8 in the *Index*.
[20]Incorrectly cited as 662-2 by Boie (1827). According to Duméril & Bibron (1844) this image was copied after Seba, Tome I, Pl. 21, fig. 1. Merrem (1821), however, interpreted the similarity between the plates differently (see text).
[21]Reference to 'Mus. Linck' 32 (= *Icones* plate XXXII) is omitted from Scheuchzer's (1735) plate 678-2.
[22]This figure is cited only as 717 (without figure number) in the *Index*.
[23]In the University of Leipzig copy of the *Index* annotated by J. H. Linck the Younger specimen number 684 is crossed-out in association with plate 737-3 and a note has been added on the facing page indicating that this specimen should be associated with *Coluber dipsas*, figure 5 on plate 738.
[24]This plate is not cross-referenced in the *Index*.
[25]Bonnaterre (1790) copied this image but did not cite or credit Scheuchzer (1735) in his account of *Anguis reticulatus*.
[26]The *Icones* plate references only specimen 647.
[27]Incorrectly cited as 1249-10 by Duméril and Bibron (1844).

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Table 3. Identification of the snakes and lizard illustrated in plates of the *Icones* that do not correspond to published figures in Scheuchzer (1735). Correspondences to the Linck specimen numbers, species names, and Seba references as used in the *Index* (1783) are indicated as are subsequent references to the unpublished *Icones* plates. Current Identification reflects the authors' best interpretation of the identity of Scheuchzer images based on extensive comparisons with specimens and photographs (see text). Current name in bold is a specimen positively identified as appearing in the corresponding *Icones* plate.

Icones Plate n°	**Linck (1783) number**	**Name in Linck (1783)**	**Seba**	**Schneider (1801)**	**Daudin (1802)**	**Current Identific.**
LXVI[1]				*Elaps Duberria*		*Chrysopelia pelias*
LXVIII						unknown
LXIX						*Duberria lutrix* ?
LXX						*Crotalus durissus*
LXXI						*Coelognathus radiatus*
LXXII[2]	645	*Coluber naja* Lin.	Seb. II. 94-1			*Naja naja*
LXXIII						*Naja naja*
LXXIII						*Liophis reginae* ?
LXXIV						*Liophis cobella*
LXXV				*Anguis rufus*		*Cylindrophis ruffus*
LXXVI						unknown
LXXVII						*Ahaetulla prasina*
LXXVIII					*Eryx rufus*	unknown
LXXIX	641	*Coluber mucosus* Lin.				
LXXIX						*Ahaetulla prasina*
LXXX						*Crotalus* sp.
LXXXI						unknown
LXXXII						*Oxybelis aeneus*
LXXXIII						***Helicops angulatus***
LXXXIV	572	*Anguis meleagris* Lin.	Seb. II. 21-4	*Anguis meleagris*		*Acontias meleagris*
LXXXV	495, 585, 586	*Coluber lemniscatus* Lin.				*Micrurus lemniscatus*
LXXXVI						plate missing[3]
LXXXVII						unknown
LXXXVIII						unknowm
LXXXIX						typhlonectid caecilian
XC						*Spilotes pullatus*

[1] Scheuchzer plate 606 incorrectly indicates Mus. Linck. N. 66 (rather than 67) as the source of figure B.
[2] Mislabeled XLII in *Icones*.
[3] The Roman numerals associated with *Icones* plates LXXXV and XC are clearly visible, but there are no numbers on the three intervening plates. However, handwritten pagination is continuous across the associated pages, suggesting that one plate is missing. We interpret the missing plate as LXXXVI.

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Table 4. Specimens of reptiles in the Naturalienkabinett Waldenburg identified by K. Wöpke as having been in the Linck collection at the time of the *Index Musae Linckiani* (1783–1787) and those identified by the authors as the likely subjects of images in 1730 in the *Icones Serpentum et Viperarum* (1730) and volume IV of *Physica Sacra* by Scheuchzer (1735). Inventory numbers of specimens identified by a red shelf label (signifying presumed Linck specimens) indicated in bold. An asterisk (*) indicates an egregious mismatch of the specimen and its identification on the associated shelf label/stand, implying that they became dissociated from one another sometime after the reorganization of the collection in 1933–1934.

Shelf label	**Actual Identification**	**Inventory N°**	***Icones* plate**	***Physica Sacra* plate–figure**	**Figure in this paper**
Coluber vittatus	*Psammophylax rhombeatus**	**I2022A$_3$**	XXVI	739–7	plate 6a
Coluber domicella	*Helicops angulatus**	**I2018A$_3$**	no match	no match	
Coluber filaformis	*Ahaetulla prasina*	**I2017A$_3$** (2 specimens)	XIII	655–7	
Coluber melanocephalus	*Liophis lineatus**	**I2016A$_3$**	LIII	715–2	
Coluber angulatus	*Helicops angulatus*	**I2101A$_3$**	no match	no match	
Lacerta marmorata	*Polychrus marmoratus*	**I2003A$_3$**	no match	no match	
Lacerta calotes	*Calotes calotes*	**I2037A$_3$**	no match	no match	
Ameiva surinamensis	*Thecadactylus rapicauda**	**I2040A$_3$**	no match	no match	
Amphisbaena alba	*Amphisbaena alba*	I2046A$_3$	XXXIV	652–I	plate 6b
Boa constrictor	*Boa constrictor*	I2013A$_3$	XLIV	746–I	plate 7a
Crotalus durissus	*Crotalus durissus*	I2085A$_3$	XLIII	738–4	plate 7b
Coluber pullatus	*Thamodynastes pallidus**	I2072A$_3$	VIII	678–1	
Boa hortulana	*Corallus hortulanus*	no number, in stairwell	XVII	661–9	
Coluber naja	*Naja naja*	no number, in stairwell	XLII	749–9	
Dipsas dendrophila	*Boiga dendrophila*	I2068A$_3$	XLV	662–11	plate 8a
Coluber pallidus	*Helicops angulatus**	I2014A$_3$	LXXXIII	–	plate 8b

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